

## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

## Can It Be That Long?

For 21 years "Dope" has been conducting a column in the NEWS. Doesn't seem that long, but the records prove it. For the last several nights we've been reviewing these columns, looking for items to reprint in this Silver Anniversary issue.

Selecting them has been a real problem; not only because they total close to two and a half million words, but because there is so much about people in this industry we hate to leave out.

Here, in chronological order, are just a few of the items that rang nostalgic gongs in our own memory. Perhaps we can run more later.

## Dog Stories

(Sept. 24, 1930)

A refrigeration salesman leads a dog's life, some members of that fast-stepping clan will tell you. Yet few of them in making their dogged rounds from doorbell to doorbell are so disconcertingly reminded of their canine affiliations as to be tendered dogs in payment for refrigerators.

Just to demonstrate that all things are possible in this surprising business, we have for your approval, not one, but two, yarns which center about the acceptance of police dogs as down payments.

The first to reach our ears (which appendages, thanks to the job of running this kolyum, are expanding as rapidly as the industry itself) concerns the fourth cousin of Strongheart, famed "barkie" star.

F. H. Lundgren, Frigidaire salesman in Des Moines, Iowa, accepted this animal with so distinguished a lineage as the first payment on a household unit. The dog was presented to his boss, W. A. Trolan, who promptly named it "Frigie."

Dog story number two emanates from W. L. Tyson, southeastern district sales manager for the Servel organization. This gentleman, accompanied by a commercial salesman from the Spurrier Lumber Co., of Tulsa, Oklahoma, recently sold a Servel compressor and three Larkin coils for installation in a freezer case and grocer box. In addition to some cash, three (the first story teller never has a chance) German police dogs were taken, and the customer credited with \$15.00 for each.

A postscript to this tale: Upon taking inventory, the Spurrier Lumber Co. found only two dogs about their premises. Rumor has it that the other is now responding to Mr. Tyson's whistle.

## The Best Dealer

(Dec. 31, 1930)

His name is Heber. His measurements correspond to the last reported figures on Jess Willard, he likes oatmeal for breakfast and his favorite sports are swimming and playing on the floor with his baby daughter.

The small middle western town in which Heber lives has three dry goods stores, seven grocery stores, four barber shops, nine restaurants, fourteen filling stations, seven churches, and two representatives each of the following businesses: banks, hotels, drugstores, hardware stores, clothing stores, and furniture emporiums. There is just one man in the electrical business, however, and Heber is that man.

Perhaps this picture of a prairie village dealer in electric refrigeration isn't altogether typical, yet any member of the tribe is worth watching for a time, and Heber's story is as revealing as a windy day (reminds us of a minister who preached on "Women's Fashions" and took his text from the Book of Revelations).

For six years he has been selling electric refrigerators. During that time he had a spasmodic succession of competitors, who have tried to sell more than half a dozen different makes of machines. None have succeeded in making any headway against Heber's brand of salesmanship.

Why has he a strangle-hold on all

(Concluded on Page 46, Column 1)

ISSUED EVERY MONDAY AT 450 W. FORT ST., DETROIT 26, MICHIGAN. ESTABLISHED 1926.



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2 Ways To Replace  
Copper Available

DETROIT—Distributors of brass mill products, including refrigeration supplies wholesalers who handle tubing and other brass mill products, are apparently given only two methods of replenishing their diminished inventories, under NPA Order M-82 effective Sept. 1.

Under the provisions of this order the brass mill products distributor can—

(1) He can place an order with a brass mill each month for replacement in his inventory of an equal weight of brass mill products corresponding to the amount of brass mill products consumed.

TWENTY-FIVE YEARS  
OF SERVICE TO

Only Bona Fide  
Trade-Ins Count

WASHINGTON, D. C.—Trade-ins, to count as part or all of the down payment on an appliance, must be bona fide trade-ins and not rebates or discounts the Federal Reserve Board declared recently in an interpretation of the revised regulation. To help dealers understand the difference between a bona fide trade-in and a discount or rebate, the board cited three instances where what dealers may term trade-ins are really, in the eyes of the board, discounts or rebates.

(Concluded on Page 109, Column 1)

Mfrs. Trim Output  
To Metals Cuts

WASHINGTON, D. C.—Additional cuts in fourth-quarter allotments of steel, copper, and aluminum apparently came as no surprise to manufacturers of appliances and other consumer durable goods.

They expected the cuts before they were announced last week and had trimmed their production schedules accordingly, it was reported. In view of the large number of appliances in the pipelines, the curtailed production is not expected to work any immediate hardship in the appliance industry.

(Concluded on Page 109, Column 3)

THE REFRIGERATION and  
AIR CONDITIONING  
INDUSTRIES

SILVER  
ANNIVERSARY  
1926-1951

Senate Group Plans Tax  
On More Appliances

WASHINGTON, D. C.—The Senate Finance Committee has applied the 10% manufacturer's excise tax to a number of new appliances that were previously untaxed.

These include household type exhaust and blower kitchen fans, electric mangles, dishwashers, floor polishers and waxers, belt-drive fans.

(Concluded on Page 109, Column 5)

Walter Hill Forms Own  
Product Designing Firm

DETROIT—Walter P. Hill, who for 15 years was manager of product development for Wolverine Tube Division, has formed his own company here to specialize in product

(Concluded on Page 109, Column 4)

Pfaff Succeeds Smith  
As President of  
Baker Refrigeration

NEW YORK CITY—Otto A. Pfaff, president of American Wheelabrator & Equipment Corp., owner of Baker Refrigeration Corp., has announced the resignation of Frederick W. Smith as president of Baker Refrigeration and manager of Baker Mfg. Div. of American Wheelabrator & Equipment.

While Smith will be engaged in other business, he will continue to serve Baker Refrigeration as a consultant and as a member of its board of directors, it was stated in the announcement.

Pfaff was elected president of Baker Refrigeration to succeed

(Concluded on Page 109, Column 5)

Bendix May Introduce  
Refrigerator Line In '52

SOUTH BEND, Ind.—The inference that Bendix Home Appliances, Inc. will introduce a line of household electric refrigerators in 1952 was not denied by company officials, following the severing of connections with an advertising agency that already has a refrigerator account.

Bendix and Tatham-Laird agency of Chicago announced that they will sever connections about the middle of 1952, the announcement making reference to the "imminence of product duplication." This could only mean refrigerators, as Tatham-Laird handles the Admiral refrigerator account.

Additional current news stories will be found on pages 109, 110, and 111 of this issue.

Relates Industry  
Progress as Told  
In News Stories

Refrigeration, as an industry, achieved stature in 1926—the year AIR CONDITIONING & REFRIGERATION NEWS was founded. In September of that year several incubating manufacturers of household and commercial refrigeration products met at Walden Woods, Mich., to form a Council. After years of trial-and-error, frustration, and disappointment, they decided jointly that their business had a future. At that meeting the first issue of THE NEWS was presented by its founder, F. M. Cockrell.

To celebrate its Silver Anniversary, AIR CONDITIONING & REFRIGERATION NEWS presents in this issue a capsule collection of significant news stories taken from the pages it has published in the last 25 years.

Selecting these news items has been a major problem. Despite the fact that this 112-page issue is the biggest publication in the history of our industry, many stories of real importance necessarily had to be omitted. However, the editors hope that it provides a lively and faithful picture of a growing industry.

In the unfolding of its story of the industry for the past 25 years as told in news stories the editors have attempted to provide a record of "who did what when" as a kind

## Extra Copies

Extra copies of this biggest issue of the News with its important reference material will be available at the following prices:

Single copies, 50 cents each.  
Ten or more copies, 40 cents each.  
Fifty or more copies 25 cents each.

of a permanent reference file; to trace industry trends; and to give a flavoring of some of the sales and operating tactics used by selling, installing, and servicing firms in the field.

As an anchor for these selected news stories, the editors have created a mythical industry veteran who hopes his son can take over his business.

"Son," he tells him, "best way you can learn how and why things are the way they are now is to leaf through these bound volumes of Refrigeration News. Take, for instance, . . ." and he goes on from there . . . picking out items year by year, and adding appropriate comments.

Additionally, a random choice of "Inside Dope" paragraphs pertinent to each year are thrown in, as well as a quick survey of the advertising themes which balanced the NEWS during 25 years of devotion to the industry's progress

Refrigerated Steak, Pie  
Win Verdict Over  
Dried Variety

SCHENECTADY, N. Y.—It looks like steak and apple pie are here to stay.

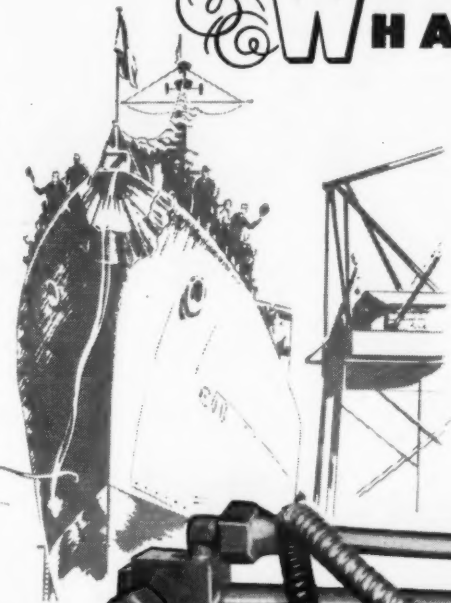
Modern research is making encouraging progress in developing nourishing synthetic and dried foods, but the substitutes will probably never taste as good as the real thing, according to George L. Baker, of the U. of Delaware Experiment Station. The "real McCoy" foods that generally need to be preserved by refrigeration will always have an edge in taste.

Speaking recently on the General Electric Science Forum over radio station WGY, Mr. Baker said that even though they might not be too tasty, dried foods are important, since ten tons of fresh edibles can be reduced to one ton of dried food.

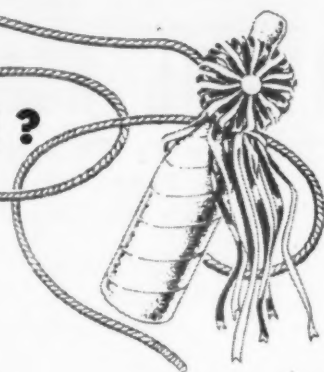
Baker pointed out that a great amount of laboratory work is being devoted to the prevention of possible food shortages, such as occurred in Europe during World War II.



## WHAT'S BEHIND TRADITION?



Many years ago it was believed that a sacrifice on the bow of a ship would act as an offering to the sea gods and protect those on the ship. Through the years there were many variations on this tradition. It was only recently that it became the custom to break a champagne bottle across the bow in launching a ship.

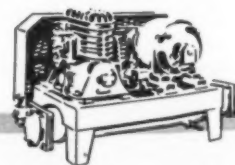
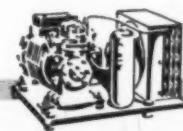
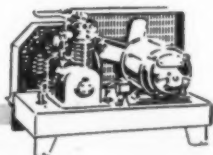


Model Z-150W, 1 1/2 HP. Copelametic, illustrated

## the Copeland based on leadership in engineering developments

We're rather proud that through the years the name COPELAND has become a tradition in the field of refrigeration. Looking back, it is not too much of a surprise. Copeland was actually the first name in the development of automatic electric refrigeration. Through the years of refrigeration progress most of us in the Copeland organization have shared your individual problems and have worked along with you to their successful solutions.

We feel one of the most outstanding forward steps in refrigeration progress was the introduction of COPELAMETIC... the ACCESSIBLE hermetic... in 1941. Most of you realize that 9 out of 10 service calls were due to belts, seals and improper lubrication. COPELAMETIC took those problems off your hands by eliminating belts, seals and manual oiling. Not being satisfied, Copeland engineers went even further. With precision engineering they made this hermetic ACCESSIBLE



REFRIGERATION UNITS (OPEN-TYPE AND COPELAMETIC), WATER COOLERS



# COPELAMETIC

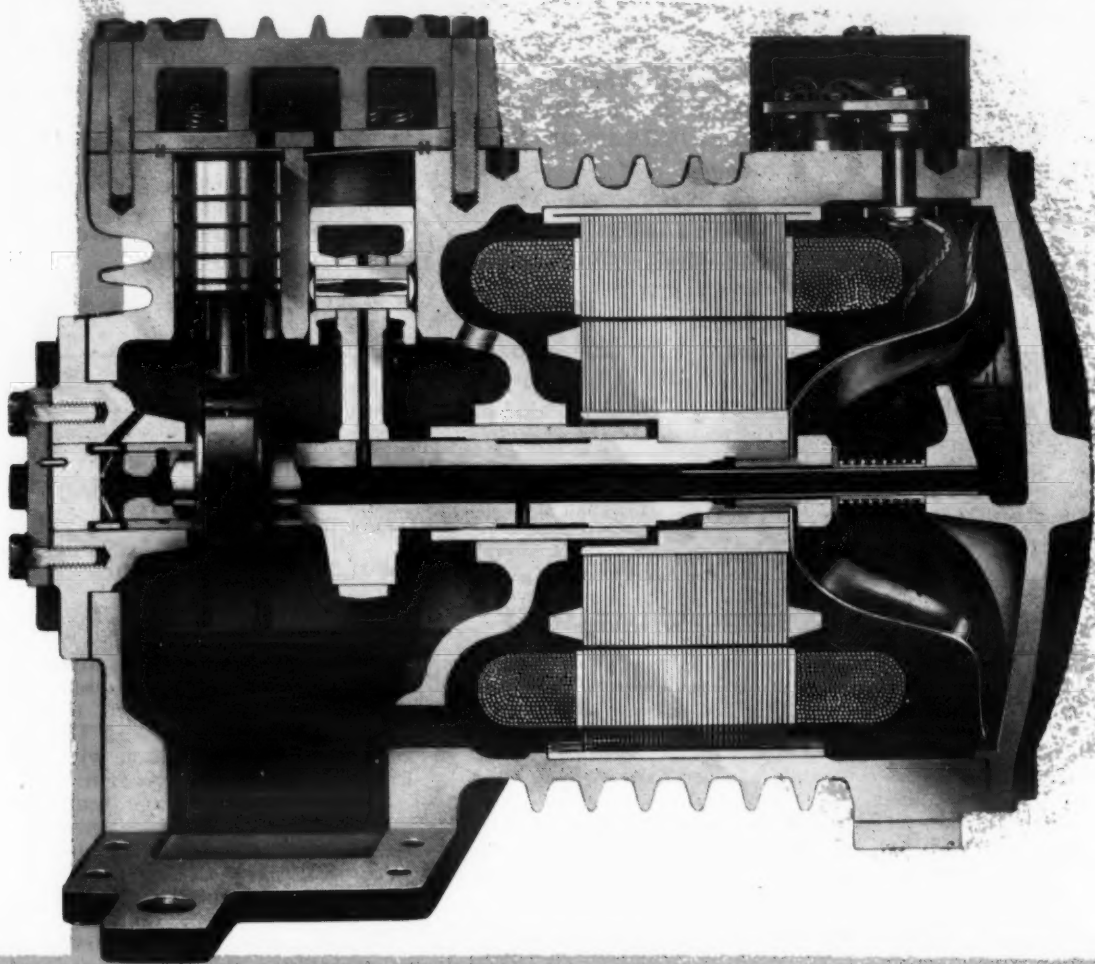
THE *Accessible* HERMETIC

**combines the best features  
of welded-in and open-type units**

Because Copelametic's accessibility permits adjustments or parts replacement in the field, it's the favorite with leading producers of air-conditioning equipment, frozen food, ice cream and beverage cabinets, milk coolers and many other refrigerated fixtures.

In these times of critical materials, it's important to know Copelametic need never be returned to the factory. Forced-feed lubrication protects all bearing surfaces. Violent oil movement across the motor is eliminated and there's no refrigerant flowing through the windings. Large integral-cast fins dissipate heat rapidly.

Copelametic provides all sizes for all applications — 1/6 HP to 7 1/2 HP, inclusive. Air-cooled models through 3 HP. Water-cooled models 1/3 HP to 7 1/2 HP, inclusive.



## SELF-CONTAINED, OPEN-TYPE UNITS

The efficient, compact models of this type are designed for the complete range of temperature requirements. Receivers are mounted vertically to cut down the over-all height. Bases are sturdy. Condensers have large-area, finned-tube surfaces for minimum head pressure and high operating efficiency. Special-type fans and carefully balanced compressors give quiet, smooth operation.

# tradition

## ... in actual performance

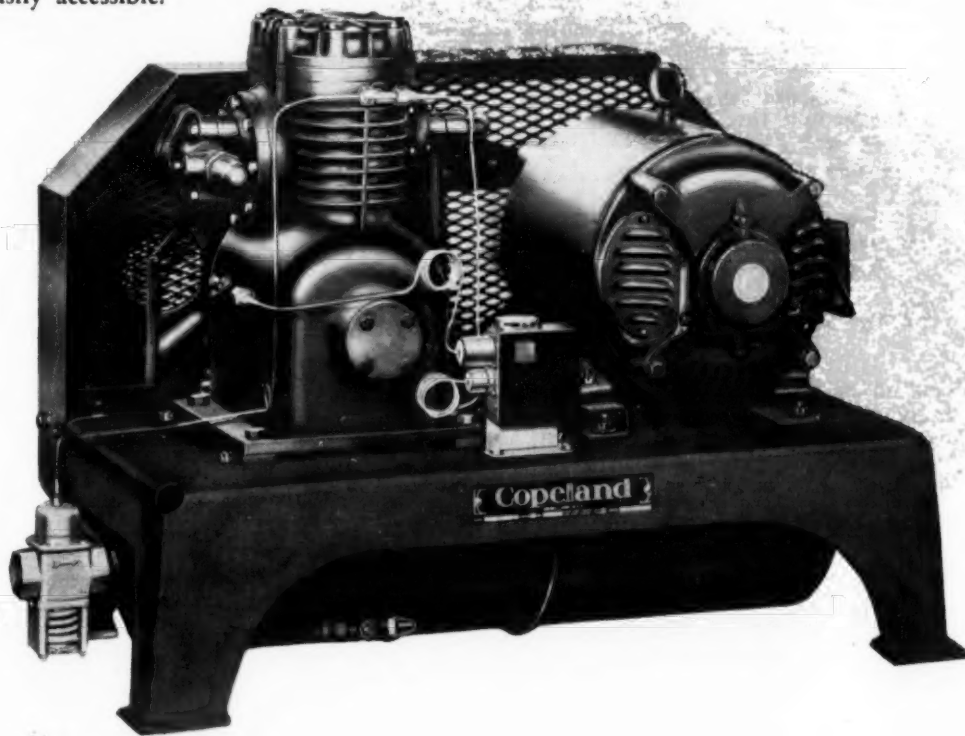
That is of the utmost importance to you because valve plate, pistons, etc., can be serviced on the spot. Never a need to return a COPELAMETIC to the factory. That's why many more than 1,000,000 are in service today.

Air-cooled, remote COPELAMETICS range from 1/4 HP through 3 HP. There are water-cooled, remote units from 1/3 HP to 7 1/2 HP, inclusive.

## PLUS A FULL LINE OF OPEN-TYPE UNITS

### REMOTE, OPEN-TYPE UNITS

Air-cooled models in this line range from 1/4 HP through 3 HP, water-cooled models 1/3 HP through 7 1/2 HP. You'll find a Copeland unit for every application. Multi-belt drive increases belt life materially. Horizontal-type, seamless steel shell receivers are electro-hydrogen welded. The simple design of the rugged, fabricated-steel bases makes all fittings easily accessible.



**Copeland**  
DEPENDABLE *Electric* REFRIGERATION



**COPELAND REFRIGERATION CORPORATION • SIDNEY, OHIO**





"So you want to know how this refrigeration business got the way it is, do you, son?" the old-timer quizzed.

"Well, I don't know a better way to find out than to thumb through some of these old issues of AIR CONDITIONING & REFRIGERATION NEWS—or ELECTRIC REFRIGERATION NEWS as it was known 25 years ago."

"Twenty-five years ago?" the newest member of the firm exclaimed. "Were they selling electric refrigerators and refrigeration equipment that long ago? That was before I was born."

The old-timer chuckled. "I'll say they were selling them in those days. But they were just getting started in 1926—as an industry that is. Here, look."

"The Electric Refrigeration Council was one of the very first efforts of the manufacturers to organize on an industry basis. It didn't get very far, but it was a step that got the manufacturers thinking of themselves as an industry with many problems in common. The electric refrigeration industry."

## Electric Refrigeration Council Meets Again at Waldenwoods

Six of the leading manufacturers of electric refrigerators, now cooperating in a publicity and advertising program being handled by the Society for Electrical Development, are meeting at Waldenwoods, to consider an extension of the present program and to perfect their trade association, the Electric Refrigeration Council.

This is the fourth meeting of the group which now includes the Kelvinator and Nizer divisions of the Electric Refrigeration Corp., General Electric Co., Servel Corp., Copeland Products, Inc., and Delco-Light Co. (Frigidaire). The Westinghouse Elec. & Mfg. Co. has been invited to participate in the activities.

"There were some who thought that some of the 'wild' selling ideas being tried to promote electric refrigeration sales might lead to its ruin."



### Couzens Ice Machine Company Dissolved; Blame Time Payments

After incorporating with a capitalization of \$1,000,000 and having taken over the Superior Electric Refrigerator Co. of Lima, Ohio, with plans to manufacture and sell household machines on a large scale, the Couzens Ice Machine Co., Detroit, has announced that it would abandon the business.

The reason given by Senator Couzens, president and chief stockholder of the corporation, was that in his opinion the manufacture and distribution of electrical refrigerators seemed bound up with the installment or deferred payment method of selling. This he stated he believed to be economically unsound.

"Still very much in its infancy in 1926, the industry counted some 340,000 units in use, both commercial and household, compared with 40 million or more today."

### Estimate 339,046 Electrics In Use

As of Aug. 15, 1926, the total number of electric refrigerators estimated to be in use is 260,365 domestic and 78,681 commercial, or a combined total of 339,046. The average saturation is 1.78 per cent. The South is highest with 2.41 per cent. The West is lowest with 1.15 per cent. The East rates 2.00, and the Middle West 1.70 per cent.



"Why did they call it the electric refrigeration industry, pop? Why not the mechanical refrigeration industry?"

"That's easy. Here's why. . ."

### Why Call It Electric Refrigeration?

(From an editorial from the Sept. 11, 1926 issue)

Manufacturers of refrigerators (cabinets and boxes, we call them) are frankly puzzled, and somewhat disturbed by the new term "electric refrigeration." According to their view it should be called mechanical or chemical refrigeration. In their terminology an electric refrigerator is a "portable self-contained refrigerated compartment cooled by a mechanical device."

Electrical men have long ago adopted the attitude that anything which is operated or controlled by electricity is *electrical*.

So it is with the new method of protecting food. An electric motor is used, electric wiring, and electric current are necessary, therefore, it is an *electric* refrigerator.

"Now, take a look at this story if you want to see one of the early struggles that had far reaching effects on how the industry is set up today. . ."

## Delco Sues Absopure To Uphold Claims on Refrigerator Patents



"Some of the old competitive advertising slogans might startle you newcomers. You think automatic defrosting is a new wrinkle? Well, look what this 1926 advertisement said."

### Belding Hall ElectrICE

The simplified electric refrigerator  
The ElectrICE is Self-Defrosting

Legal proceedings recently instituted by The Delco-Light Co. of Dayton, Ohio, against the General Necessities Corporation of Detroit, Mich., will undoubtedly prove to be of far reaching importance in determining the future development of the electric refrigeration industry.

The bill of complaint filed in the United States District Court, Eastern District of Michigan, Southern Division, charges that the defendant company is infringing upon basic patents. The Delco-Light Company seeks to establish its right to the air-cooled machine and other important features now being widely used by other manufacturers.

### Editorial Aims of Electric Refrigeration News

To encourage the development of the art.

To promote ethical practices in the business.

To foster friendly relations throughout the industry.

To provide a clearing house for new methods and ideas.

To broadcast the technical, commercial, and personal news of the field.

"Commercial electric refrigeration was making progress even faster than household. It opened the way to tremendous growth in the dairy and ice cream industry."

### Commercial Refrigeration Equipment Exhibited At Dairy Industry Show

Electric refrigeration equipment for ice cream manufacturers, distributors, and dealers was a feature of the exhibit held in Detroit Oct. 6 to 14 in connection with the Dairy Industries Convention.

Electric refrigeration cabinets and coolers for dairies, cabinets for bottled goods and other special applications, dairy trucks and soda fountains with electric refrigeration equipment, were shown.

It was evident from a survey of the exhibition that the progress of the ice cream industry has been largely due to the adoption of mechanical and electrical methods of producing and handling its products.

## "THE ICE THAT FAILED" OR "THE TRUCKMAN'S BRIDE"

Humorous Motion Picture Used To Instruct Ice Cream Men at Dairy Industries Convention



"A competitive struggle with the ice industry led to some tactics that might sound hilarious today, but were deadly serious then."



"One of the problems that still faces the industry—who should sell its products—was a problem then, too. Look at this story:"

### Who Should Sell Electric Refrigeration?

A certain automobile manufacturer, eager to grab all the territory possible, gave the agency of their car to a jeweler in a fair-sized city. He took it on as a sideline. The car was a good one as compared to other cars in those days, and the jeweler sold a few, but he was not prepared to give service. In fact, he did not want to be bothered with service. As a consequence the cars did not give satisfaction, and although the motor car manufacturer continued to build good cars, it was a number of years before they were able to get re-established in that territory.

The same thing is happening to the electrical refrigerator industry today.

Good machines are being built today, but the tendency seems to be to decrease selling prices. Elec-

trical refrigerators can be sold at present prices. Would it not be to the advantage of the manufacturer in the long run to use at least a portion of any saving in manufacturing cost to insure future service to owners?

"There was very little training given on modern refrigeration, even in the best engineering schools. Manufacturers discovered they had to set up their own training courses, such as that offered by Nizer. Some of the industry's later leaders learned their ABC's of refrigeration from such schools."

### Refrigeration Science Explained In Training Course

Over three thousand students are now enrolled in the Nizer Service Correspondence School, a complete course of training in 24 lessons now being offered free by the Nizer Corp., indicating the great interest in electric refrigeration and the widespread desire to become informed regarding the detailed operation of the the equipment.



**YOU'LL  
MAKE  
A  
GOOD  
MOVE**

when you sell KOCH refrigerated display cases and refrigerators to your good customers for proper food preservation. KOCH offers you a complete line of profit-making merchandise . . . the line of least resistance. There's a size and model to meet every commercial need. It's your move. Fill in the coupon . . . or write today on your letterhead for more information.

KOCH REFRIGERATORS  
North Kansas City 16, Mo.

Send me complete information on the KOCH line of refrigerated display cases and refrigerators.

Name.....

Address.....

City..... Zone..... State.....

NORTH KANSAS CITY 16, MO.

**KOCH  
REFRIGERATORS**



# There are 37 Years of Constructive Experience Back of Every HENRY PRODUCT



When an organization, insignificant in size at one time, rises to a position of Leadership in an industry, there must be a deep seated reason why such growth has been possible.

When a company serves a market for nearly two generations, through two World Wars, through good times and bad times, and still continues to grow in the confidence of those it serves, there must be an underlying cause for such confidence.

Leadership is earned—never bestowed. It is not static. He who holds its banner has had a long and arduous task. Harder still is the struggle to maintain this position because of the constant competitive pressure by others who would seek the banner for themselves.

*The one who serves best Serves First.*

In addition to sound policies and good management that must prevail in any successful business, there has been one underlying reason for the preference shown for Henry Products, namely, *the constant effort of the Henry management to recognize and to anticipate the changing needs of all factors in the air conditioning and refrigeration industry and to meet these needs in the form of products of advanced engineering design and construction.*

Years ago when anhydrous ammonia was the common refrigerant used, an early famous Henry "First" was an ammonia valve and fitting line with exclusive operating features and which was more compact in size, made possible through the use of a special iron valve body having denser molecular structure, as well as through the use of steel forgings.

In those days the average ammonia relief valve frequently had to be replaced after it had "popped" because the valve would not reseal itself properly. Henry's introduction of a relief valve that could be reseated was another "First" that brought a new source of security to the plant operator.

With the advent of Freon and other low pressure refrigerants, the following famous Henry "Firsts" were introduced:

The Permanent Mold Iron Compressor Valve—also the Wing Cap Valve, both with Steel Companion Flanges and Separable Brass or Steel Sleeves—The Packless Valve with Ports-in-Line and Balanced-Action—The Distortion-Proof Flange for Dryers and Strainers—The One-Piece Drawn Brass Shell for Dryers and Strainers—The Welded Steel "Y" Strainer—The Abso-Dry Pressure Sealed Dehydrator—The Dispersion Tube for Dryers—The Dehydra-tector, the Dryer with the Built-in Liquid Sight Port—and The Diaphragm Relief Valve.

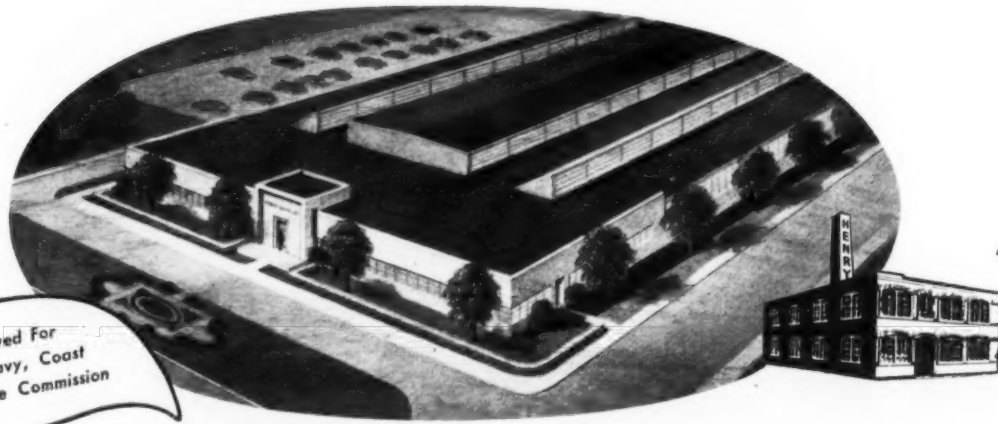
On the drawing boards today new designs and improvements to existing units are being prepared. Some of these products have already been advanced to the laboratory for testing. Introduction must await completion of exhaustive tests and the greater availability of restricted metals now required for the Nation's Defense.

To every manufacturer, jobber, contractor and service man our gratitude is expressed for the loyalty they have shown to Henry Products throughout the years. We pledge a continuance of the same policies that have merited confidence in the past.

*Tomorrow as well as Today you can expect the first things first from Henry.*

New and Enlarged Plant  
Occupied in 1948

Henry Products Are Approved For  
Use By The Army, Navy, Coast  
Guard and Maritime Commission



An Early Home of the  
Henry Valve Co.

## HENRY VALVE COMPANY

VALVES • DRIERS • STRAINERS • CONTROL DEVICES AND ACCESSORIES FOR REFRIGERATION,  
AIR CONDITIONING AND INDUSTRIAL APPLICATIONS

MELROSE PARK, ILL. (Chicago Suburb)  
CABLE: HEVALCO, MELROSE PARK, ILLINOIS



# Salute

## to Air Conditioning

*from the Oldest Maker of*

### CONGRATULATIONS . . .

from one old-timer to another . . . for  
a job well done! . . . Your news reporting and editorial  
vigilance have contributed mightily to making the past  
25 years outstandingly successful for all our industry . . .  
You have reported, faithfully and inspiringly, a period  
packed with tremendous achievements—refrigeration  
advances that have brought our country ever-higher  
standards of health and convenience.

May you enjoy anniversaries without end!

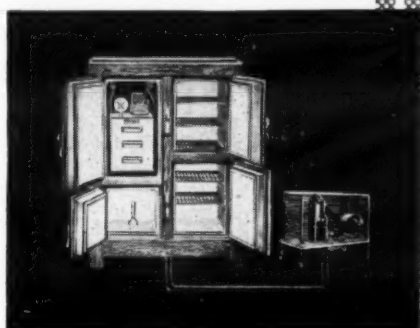


# and Refrigeration News

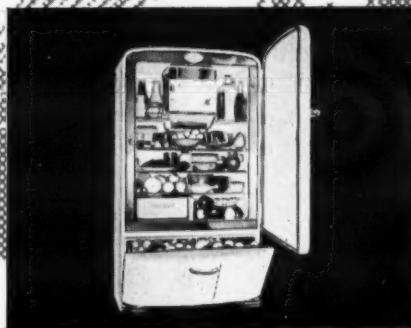
*Electric Refrigerators for the Home*

## KELVINATOR

**You Can Look to Kelvinator for All That's New!**



**1914: Kelvinator!**—Pioneer in electric refrigeration for the home.



**1941: Kelvinator!**—Developed the "Cold-Ban", a sanitary, easy-to-clean breaker strip that eliminated all unsightly screwheads.



**1926: Kelvinator!**—Introduced self-contained electric home refrigerators.



**1948: Kelvinator!**—First cold-clear-to-the-floor design with first refrigerated storage bin for fruits and vegetables.



**1936: Kelvinator!**—First across-the-top freezer chest.



**1951: Kelvinator!**—First with the "Humidiplate" ... a separately controlled system for regulating both cold and moisture.

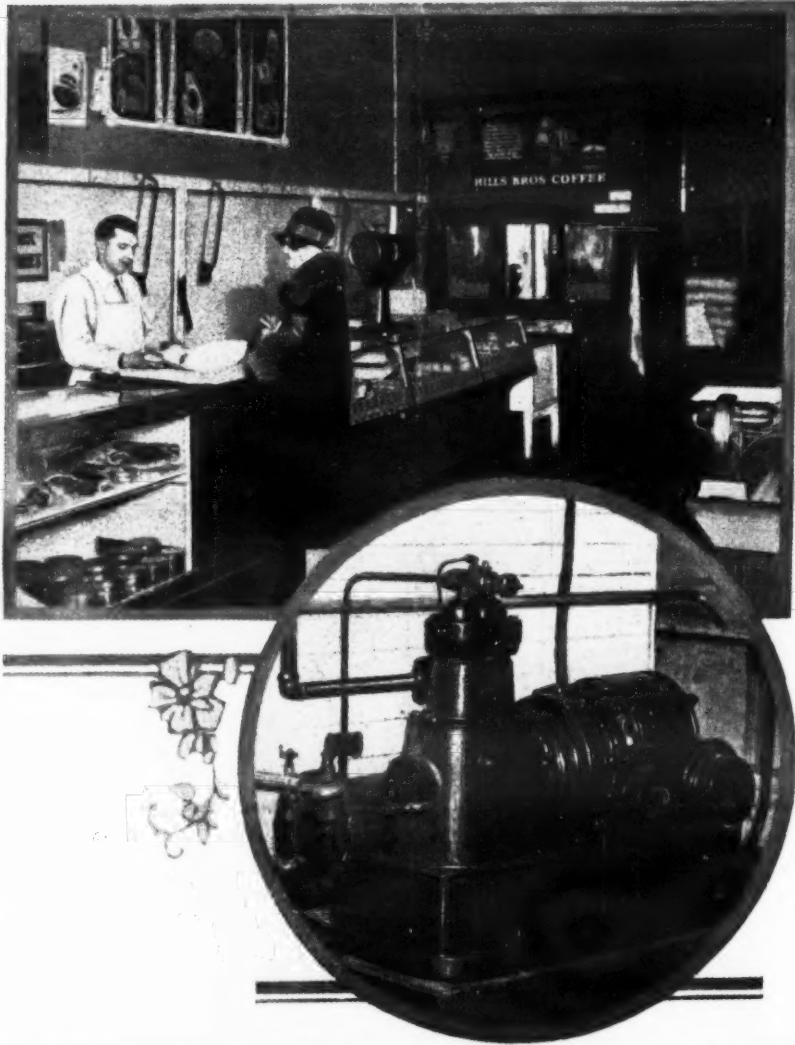
# Kelvinator

REFRIGERATORS • RANGES • FREEZERS • WATER HEATERS • AIR DRIERS

Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan



## Ice Bill Was \$40, Electric Refrigeration Costs Only \$15 Per Month In This Meat Market



Low pressure commercial refrigeration systems were beginning to appear in food markets in 1927, the coils often being put in the ice bunkers of ice-type display cases and coolers already in the stores. Photo was taken in Noack Market, Boulder, Colo., which installed a Servel unit. Compressor was set in plain view in rear of store where customers could see it.



"The household refrigerator manufacturers, after some ineffectual organization attempts of their own, were invited to get in under the NEMA banner, which they did and have continued to do."

### N.E.M.A. Plans to Invite Electric Refrigeration Manufacturers to Join New Appliance Division

"Commercial refrigeration equipment was proving more satisfactory than former methods in many different kinds of application."

### Electrically Refrigerated Soda Fountain Makes Big Hit With California Druggist

The Newport Beach Pharmacy at Newport Beach, Calif., after giving an electrically refrigerated soda fountain a few months trial is completely sold.

Owner Walter Eastlack and Orris Hampton, are qualified to judge between the old way and the new. They have records, daily running expenses, possibilities, and popularity of both kinds before their eyes and both are wholly in favor of the electrically refrigerated fountain.

"In this business, as in any other," Hampton said, "We want the customer to come back for more, so we must back up the appeal to the eye with a good taste—and here again the electrically refrigerated fountain is better."

"This should stop for once and for all the opening conversation that staff members often get in the field which starts like this, 'Yessir, I've been reading the NEWS for a long time and I'll bet I might even have been your first subscriber.'"

### First Subscriber

H. K. Patterson, sales manager of Kelvinator-Canada, Ltd., London, Canada, has the honor of being the first subscriber to ELECTRIC REFRIGERATION NEWS. When the first issue was sprung as a surprise at the Waldenwoods meeting last September, Mr. Patterson took one look and promptly handed over a dollar bill.

"Estimating the right size of equipment for commercial installations was often done by 'rule of thumb' in the early days. However, refrigeration can be an exact science, and the engineers begin to develop formulas for making proper estimates."

### How to Figure Refrigeration For Commercial Installations

Formulas and Data Used by Engineers in Calculating Heat Leakage Explained

"This is pretty good evidence that refrigeration was a substantial piece of business, even for a corporation as large as General Motors, back in 1927."

### 2500 Attend Frigidaire Annual Sales Convention in Dayton

The annual two-day sales convention of the Frigidaire Corp. and Delco Light Co. held at Dayton, Ohio April 13-14 was the greatest ever held by these units of the

General Motors Corp.

Frigidaire production will go on a basis of 50,000 units per month beginning May 1, E. G. Biechler told the convention.

"A complete directory of industry manufacturers, classified by product, has been one of the by-product services offered by the NEWS through the years. (The 1952 edition is scheduled to make its bow at the All-Industry Show.)"

### Electric Refrigeration Directory

The Executive Personnel of the Manufacturers of Electric Refrigeration Equipment and Cabinets



"Old refrigeration safety codes, such as New York's one dated 1915, were becoming outmoded in the light of industry developments."

### PROPOSED SAFETY CODE IN NEW YORK UP FOR HEARING

After a period of two years spent in considering the fire and safety hazards of refrigeration, the Fire Department of the City of New York has submitted an ordinance to the Board of Aldermen which amends the code affecting the installation of refrigerating plants, which code has been in effect since 1915.

About a year ago, the New York Fire Commissioner requested representatives of the manufacturers to present suggestions for a revision of the code. Thirteen refrigerating engineers were present at the meeting held in October, 1926. The suggestions offered were turned over to C. K. Michels, refrigerating engineer of the Fire Department, who drafted a tentative ordinance.

### Directions for Making Synthetic Desserts

Mix together three parts soap flakes with one part water. Stir well to dissolve flakes. Beat with electric beater until stiff and dry. Color with any desired fruit extract, leaving part of suds white to use for ornamentation. This may be put through the pastry tube like whipped cream.



"Ice cream manufacturers were finding more and more good reasons for putting modern mechanical refrigeration into their distributing operations."

### Ice Cream Makers

#### Advocate Electric Refrigeration Use

That the electric refrigeration cabinet and electric fountain are becoming more generally used in all sections of the country is evidenced by its prominence in the discussions of the different state and regional ice cream manufacturers conventions held during the past two months.

The Hydrox Corp., Chicago, in advocating wholesale installation of electrical cabinets stated that the manufacturer would be able to make delivery of ice cream at any hour instead of between eight in the morning and noon.

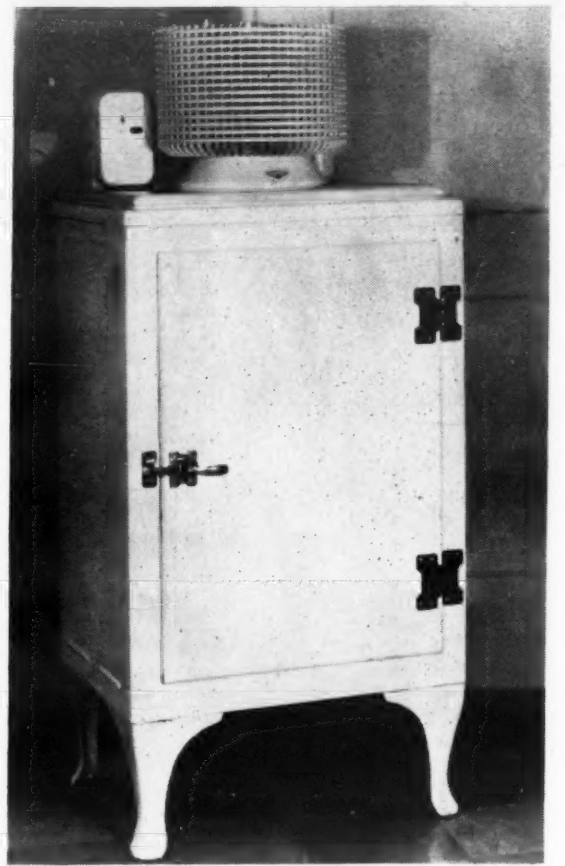
"This problem was one that bothered other refrigerator manufacturers as well as Frigidaire for a good many years."

### What Will Happen if Everybody Calls 'Em Frigidaire?

E. G. Biechler, president of the Frigidaire Corp., it seems, has noticed quite a decided inclination on the part of the buying public to look upon "Frigidaire" as a generic name for mechanical refrigerators, and he wonders just what effect this is going to have on the fortunes of his company.

"When the competing refrigerator is first class merchandise," Mr. Biechler says, "the application of our name to it, even though erroneously, might not present such a problem to us. But when our name is thus given to an article that proves unsatisfactory to the buyer there thus is created a situation that inevitably will work out to our detriment. The satisfied buyer in praising her 'Frigidaire' to her friends is doing some good advertising for us even though she may have a competitive make. But when she has the opposite feeling about her 'Frigidaire' and expresses herself accordingly, she is unwittingly doing us an injury."

General Electric's refrigerator department was formed in 1926 (they're celebrating a Silver anniversary, too) and in 1927 G-E introduced its "Monitor Top" refrigerator with the hermetically sealed "on the top" unit which distinguished the line for many years. Picture shown is of a 1927 model.



"General Electric's entrance into the household refrigeration industry with its hermetically sealed 'Monitor Top' unit was one of the big news events of the year 1927."

## General Electric Company Starts Big Sales Program

Will Expend Over \$1,000,000 for Advertising in 1927—New Line of Eight Models Announced

On Jan. 1, 1927, the General Electric Co. established a separate department to take complete responsibility for its electric refrigeration business. This organization has been named the Electric Refrigeration Department of the General Electric Co.

Two manufacturing plants of the company, in Schenectady, N. Y. and Fort Wayne, Ind., are now producing electric refrigeration equipment and preparations have been made for large-scale production of eight domestic models ranging in price from \$260 to \$600. The smaller unit,

"For many years after 1927, a great majority of the dealers handled only one line of refrigerators. This story reveals some of the thinking then about the handling of a variety of lines, which is generally practiced today."

### Los Angeles Home Furnisher Reduces Sales Resistance by Selling Two Makes of Electric Refrigerators

The Electric Refrigeration Department of Barker Brothers, the Los Angeles store which is a "Complete Furnisher of Better Homes," has doubled its sales this year by putting in two kinds of electric refrigerators.

Edward L. Glancy, sales manager of this department, said, "It gives the salesmen two chances to win. Both machines are excellent, thoroughly dependable, do what they promise they will, and each has its own following."

"Each manufacturer puts out his own line of 'selling talk.' We don't pay much attention to that. Each of our salesmen works out his own method."

"We have practically no lectures or demonstrations. We always have the units running in the department."

"The matter of capacity data is a hot subject today. It probably will be when the 50th anniversary rolls around."

### MORE ACCURATE DATA ON CAPACITIES NEEDED, SALES ENGINEER SAYS

"Many a man who was carrying a tool kit in those days is now holding down an executive position in the industry today."

### Man Who Carries A Tool Kit Today Destined to Work Rapidly to the Top

Rapid Growth of Electric Refrigeration Makes Large Opportunity for Men Who Thoroughly Understand Correct Installation and Service Methods

"Kelvinator's plant, probably the first to be built specifically for the production of electric refrigerators, was completed and opened in 1927."

### New Home of Electric Refrigeration Corporation Dedicated

Over 4,000 Distributors, Dealers and Guests of Kelvinator, Nizer, and Leonard Divisions Attend Ceremony



"Hot darn! When they talked about colors for refrigerators in those days, they weren't kidding. Check some of those color combinations listed."

### Brilliant Colors Featured In 1928 Kelvinator Line

The idea of making the electric refrigerator a "thing of beauty" in apartments, duplexes, and small homes by various color finish combinations and designs belongs to Kelvinator Corp., Detroit, which has just announced a new line of special finish refrigerators.

For the modern kitchen which is each day becoming a more attractive room, we find the following color combinations listed: Chinese red base with black border and a parrot on door, Turquoise blue base with border on door of conventional orange and lemon design, apple green base with fine border on door of darker green, and jersey cream base with fine border on door of dark green.



1927



"There's a lot of good advice in this article which might well be applied in today's market."

### Service Delays Turn Customers Into Kickers

(By Winston Paul, New York Distributor for Frigidaire)

"The public attitude toward electric refrigerators and toward automobiles is an entirely different thing. Even though there has been a fine increase in electrical refrigerators the public yet does not come in and buy them; you have to go out and create the demand; you have to go out and show how they can be used; you have to employ special methods which require some pressure back of it. A great many people think that all you have to do is to make this thing and it sells itself. . . . Even though you sell the machine, a lot of men forget this fundamental point—that, unless you can install that machine in the man's home so that it will function correctly, the customer is dissatisfied and a kicker."

"The neck of the bottle is the installation or the service department of any organization. . . . Suddenly something goes wrong on a machine you have sold to a customer, and if you don't repair it the same day, he says the service is 'rotten.' This requires having a large service department to take care of the thing immediately. You and I can say it is unreasonable, but that is just what the public expects."

"As long as he was active in the management of his company the rumor kept popping up that Henry Ford was going to make a revolutionary type of electric refrigerator. The facts don't seem to indicate that he even considered it."

### Disagrees With Arthur Brisbane

Comments on Suggestion That Henry Ford Make Electric Refrigeration

A syndicated article by Arthur Brisbane which called on Henry Ford to apply his genius and mass production methods to the production of a cheap electric refrigerator within the reach of all was reprinted in a previous issue of ELECTRIC REFRIGERATION NEWS. G. M. Johnson, of the Northey Mfg. Co., Waterloo, Iowa, took exception to Mr. Brisbane's proposal and addressed him as follows:

"In terms of money, there exists no parallel to the automotive industry. Widespread market permits the Ford price. Lower price brings more orders and still lower price. Is this applicable to the household refrigerating plants? It is, to a very limited extent. . . ."

"Dependability, long life, capacity; give a user all that for, say, four to five hundred dollars, and you give him something cheaper over a ten-year period than Mr. Ford could at one hundred. Seldom is there a desire to exchange solely for the sake of appearance as is the case with an automobile. An ice machine is, or ought to be, located in the basement, and few care a hang how it looks."

### MILESTONES

#### 9 COMPANIES MERGE TO FORM WORLD'S LARGEST ICE MACHINE PRODUCER

The largest corporation manufacturing ice machinery in the world was formed on Oct. 3, when nine manufacturers of ice machinery merged to form what is to be the York Ice Machine Corp.

#### NORGE COMPANY FORMED IN DETRIOT

COPELAND SHOWS NEW WATER COOLERS

Universal Cooler To Build 20,000 Machines In 1927

"You will note that most of these editorial predictions of things to come came true, with the exception of the development of a mechanical refrigerator for the passenger automobile."



### Possibilities of the Future

Without attempting to cast a prophetic eye into the too distant future, it may be of interest to suggest some developments of electric refrigeration which may be expected within a reasonable time. For example:

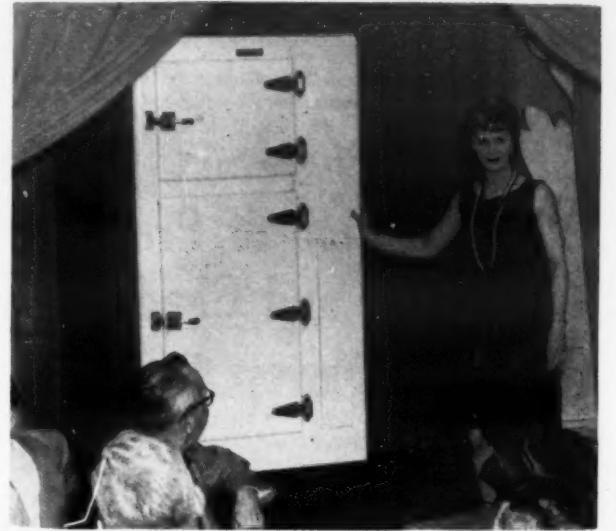
The Eskimo Pie Corp. is reported to have designed a machine for the automatic vending of their product and this suggests the possibility of a wide variety of food vending machines heretofore impracticable because of the problem of preventing spoilage.

The experiments being carried on by certain railroads in equipping dining cars with electric refrigeration, indicates the approach of the time when all Pullman cars, and even day coaches, will be provided with electric refrigeration for water cooling. Perhaps cabinets will also be installed where the porter or news-butcher may keep sandwiches, bottled milk, and other refreshments for passengers.

The popularity of touring and the increased use of the automobile for business travel suggest the need for a unit which will enable us to carry wholesome food to remote regions and free ourselves from the menace of the highly seasoned and uncertified hot dog.

And, of course, there will be an electric refrigerator for the coming transcontinental and overseas air service, constructed of the lightest materials to meet the requirements of the aeronautical engineers.

The first gas-operated refrigerator made by Servel was introduced in 1926 and was actively marketed under the name "Electrolux" in 1927. This model, the EI-6½, was a two-door model, 33 in. wide, 26 in. deep, 60 in. high. Food storage capacity was 6½ cu. ft. and the 5 ice cube trays had a total freezing capacity of 50 cubes. The all-steel cabinet was available in white lacquer or a choice of four colors—blue, green, tan, and grey.

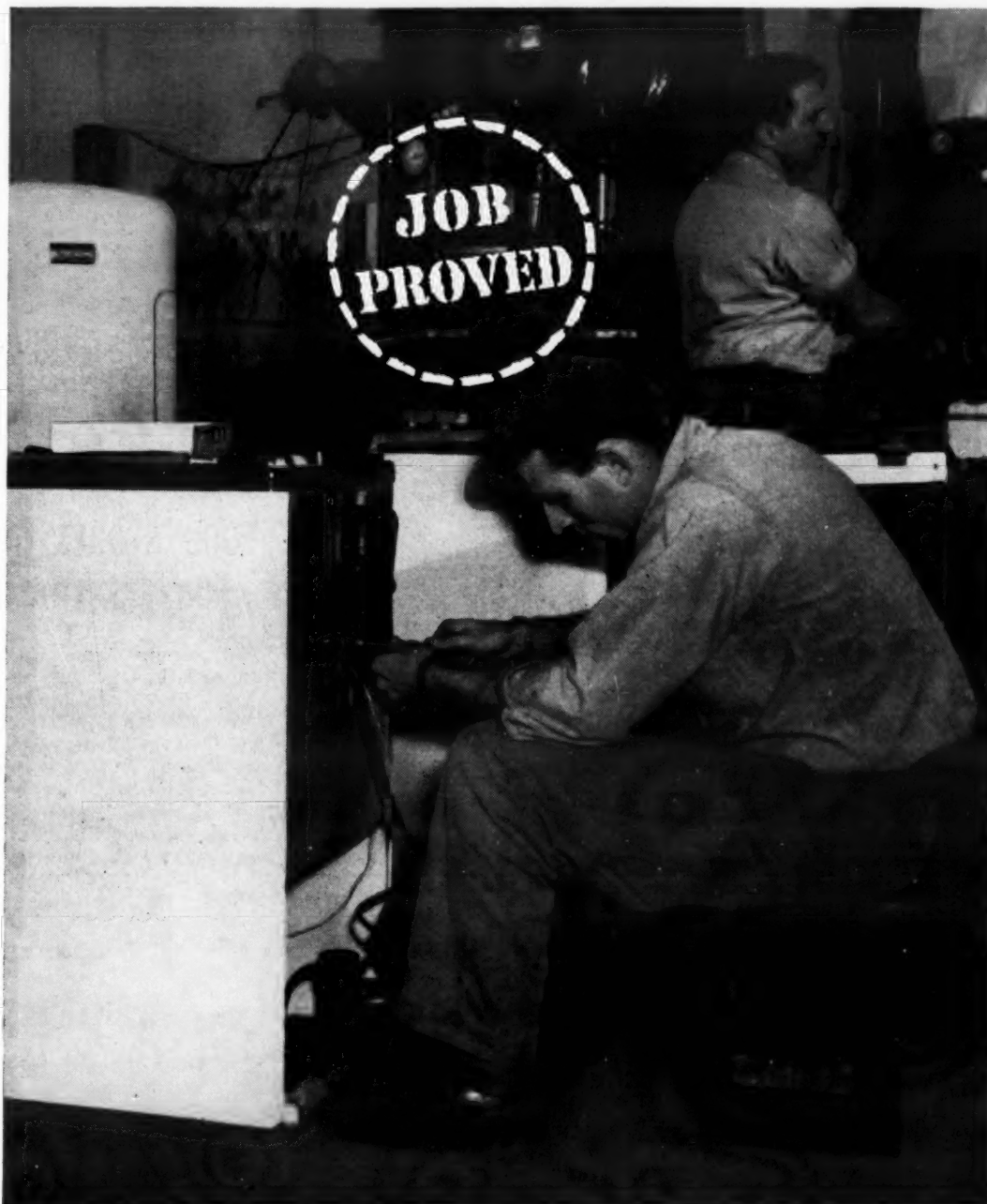


"You think you have a problem on trade-ins? So did this dealer in 1927."

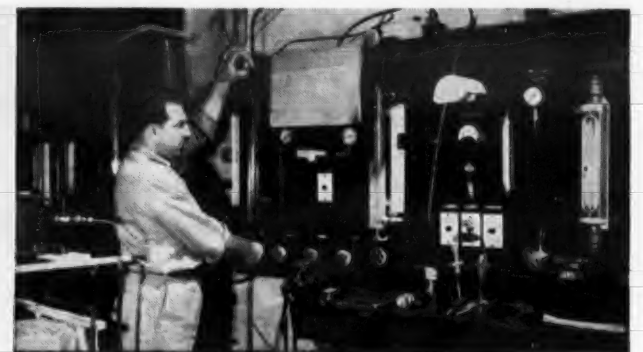
**DEALER WANTS ADVICE ON TURN-IN PROBLEM**  
Should Allowance Be Made and What About Trade-in

**CROSLEY RADIO CORP. PRODUCING NEW TYPE REFRIGERATING DEVICE**

Non-Electrical, Hand Operated Unit Designed for Farm Market



BY USING Suniso Refrigeration Oils exclusively, Judson C. Burns, Philadelphia, has spared himself emergency calls due to oil trouble. This has left him free to continually take on new contract accounts.



HERMETICALLY sealed compressor at extreme left receives new charge of Suniso under pressure from 55-gallon drum on floor above. The charging board measures the exact charge required, delivers it moisture-free and clean.



SOME refrigeration oils deposit wax in the capillary tubing of domestic units, requiring them to be dismantled and cleaned. Judson C. Burns prevents such costly callbacks by recharging exclusively with waxfree Suniso.



BECAUSE OF the reliability of Suniso Oils, units like the Crosleys being loaded on Burns' truck for delivery remain trouble-free for years. In fact, some of his units have required only routine maintenance over a period of 24 years.

## TROUBLE-FREE PERFORMANCE OF SUNISO OILS HELPS BUILD BIG SERVICE-SHOP BUSINESS

For 24 years, complete reliance on Suniso has paid off for the service department of Judson C. Burns, one of Philadelphia's largest distributors. Today Burns keeps a staff of 8 commercial service men, 8 shop service men, and 4 installation crews profitably busy. They are able to service nearly 1,000 commercial and industrial units a year because they are not handicapped by a multitude of callbacks. Some units, originally charged with Suniso, have been operating since 1926 with never a trip to the shop.

Service men everywhere have come to expect such performance of Suniso Oils. Suniso Oils flow back easily to the crankcase from the cold side of the refrigeration system; they do not deteriorate and turn to gum when mixed with Freon or other modern refrigerants; being practically wax- and moisture-free, they do not clog or freeze in capillary tubes and expansion valves. For a free Suniso Specification Card, call your jobber or write Department RN-9.

### SUNISO REFRIGERATION OILS

SUN OIL COMPANY, PHILADELPHIA 3, PA. • SUN OIL COMPANY, LTD., TORONTO AND MONTREAL







"In publishing an industry newspaper, whose first duty is to its readers, the NEWS has sometimes trod on some tender toes. Sometimes this has resulted from the conviction that it is often both wise and just to bring controversial matters out into the open and present all the possible facts."

## A. S. R. E. Secretary Disturbed by Publication of Proposed Safety Code and Changes by Engineers

### Front Page Apology Demanded of the News

Night Letter—New York NY 354P Jul 23 1928

ELECTRIC REFRIGERATION NEWS, Maccabees Bldg., Detroit, Mich.

Please arrange a front page apology for your next issue on this code business I am getting from all sides about it (stop) To begin with our council has refused for months to allow the code to be published even by me and your doing so after Edwards advised you of this fact I cannot understand on top of which you got it wrong (stop) More serious however you print a revision of the code such that its own authors could not recognize it whereas the committee has not changed a line of it (stop) Whoever it was that wrote that code his name must be stated and an apology from him to the committee is also in order if he had any hand in its being printed (stop) This is a direct perversion of the facts for which the officials get the blame and creates a mess for them (stop) There is no personal offense for your mistake and I have not looked into the new draft enough to even guess who wrote it but for your own good on this standards work you ought to realize that it is very fussy as far as publication goes and must be got right. Fiske 631P

### News Believes Industry Entitled to Know Facts

David L. Fiske, American Society of Refrigerating Engineers

37 West 39th St., New York, N. Y.

What's all the fireworks about? See July fourth issue for report of public meetings at which code was discussed and changes recommended with names of those in attendance (stop) If proposed code is adopted its requirements will be matter of vital concern to entire industry and the industry certainly has a right to know what is going on (stop) Anyone has a right to recommend changes (stop) Please be more specific about errors charged also who should we apologize to and what for? ELECTRIC REFRIGERATION NEWS

"The controversy about multiple systems in apartment houses (practically non-existent today) was a hot issue, and led to much of the original safety code legislation."

## Pros and Cons of the Multiple System for Apartment Houses

Owing to recent legislative action in some localities by which the multiple installation has been prohibited or restricted, much attention has been attracted to the arguments for and against this type of installation. Prominent engineers and leading manufacturing companies have taken decidedly opposite stands on the question. At present, there seems to be little chance of reconciling the opposing viewpoints. General Electric and Servel, for example, are strongly opposed to the use of the multiple system. Frigidaire and Kelvinator, insist that the method is entirely practicable and desirable. Copeland and others have recently added multiple equipment to their lines and recommend it without reservation.

MILESTONES—in the history of companies and individuals still active in the refrigeration and air conditioning industry.

## GEORGE W. MASON ELECTED CHAIRMAN OF BOARD AND GENERAL MANAGER OF KELVINATOR CORP.

George W. Mason was elected chairman of the board and general manager of the Kelvinator Corp. at a meeting of the board of directors Dec. 10, 1928. He immediately resigned his position as president and general manager of Copeland Products, Inc., Detroit, and has taken up his duties at the new Kelvinator plant on Plymouth Rd.

### NEW ALUMINUM PLATED COOLING COIL TO BE IN PRODUCTION SOON

Pierson-Larkin Refrigerator Co., Atlanta, Ga., has been recently organized to manufacture an aluminum plate cooling coil for use in connection with commercial electric refrigeration equipment.

### SUPERFAX REFRIGERATOR KEROSENE OPERATED IS SEMI-AUTOMATIC UNIT

Taking its place as a sort of "country cousin" to the electric and gas operated automatic refrigerators is the Superfax refrigerator manufactured by the Perfection Stove Co., Cleveland, which has been in use in several hundred homes in Ohio and Indiana for several months. It is activated by a kerosene flame.

### NATIONAL SAFETY CODE DISCUSSED AT NEW YORK MEETING

Following is the complete text of the proposed National Safety Code for Mechanical Refrigeration which has been in process of revision for over two years. Further changes were recommended at meetings held in New York and Detroit last week, reported elsewhere in this issue. According to the present schedule the code will be submitted to the American Engineering Standards Committee for final approval in September.

### KELVINATOR PLANT SETS NEW RECORD OF 1,000 UNITS A DAY

Kelvinator Corp. has reached a record daily production of 1,000 complete units a day as compared with a high mark of 600 units a day in April, according to A. H. Goss, chairman of the board, Kelvinator Corp., Detroit. All indications, said Mr. Goss, point to a new high output of electric refrigeration units for 1928, with four leading companies of the industry doing approximately 90 percent of the business.

### They Built Them Rugged In Those Days

From an advertisement describing the Benjamin (Benjamin Electric Mfg. Co., Chicago) all-porcelain refrigerator cabinet—1928 model:

"Pure sheet corkboard insulation, a sturdy rabbeted, glued, and screwed hardwood frame, air-tight doors and massive hardware assure long service and minimum operation of the refrigeration unit."

"The ice cream manufacturers fear about a big wave of home ice cream making in electric refrigerators were unfounded, and they eventually got a special compartment (in the form of the freezer compartment in present day refrigerators) although it isn't labeled as such."

### ASSOCIATION OBJECTS TO ENCOURAGEMENT OF HOME MADE ICE CREAM

#### Resolution

WHEREAS, the National Association of Ice Cream Manufacturers are entering the nation-wide advertising campaign for the promotion of the sale of ice cream; and

WHEREAS the Ice Cream Manufacturers are spending enormous amounts of money with the manufacturers of electrically refrigerated equipment;

WHEREAS it is of mutual interest to both the Ice Cream Manufacturers and the manufacturers of electrically refrigerated equipment that the Ice Cream Industry be advanced and protected;

BE IT RESOLVED, that the Board of Directors of the National Association of Ice Cream Manufacturers recommend that the manufacturers of electrically refrigerated equipment refrain from encouraging the home manufacture of ice cream; and

BE IT FURTHER RESOLVED, that it be recommended that the manufacturers of electrically refrigerated equipment provide a suitable compartment for carrying ice cream and as a co-operative suggestion so label and advertise the same.

### DISTRICT OF COLUMBIA DRAFTS CODE COVERING THE MULTIPLE SYSTEM



Early in the present year (1928) the Fire, Plumbing, and Electrical authorities of the District of Columbia commenced an investigation of the methods of installation and the potential hazard in connection with the so-called Multiple Unit system of refrigeration for apartment houses.

"Considerable thought was being given even in these early days to 'scientific' approaches to selling refrigerators, and Gus Mayer's charts were something of a symbol of this trend."

### MAYER'S CHARTS SHOW FOUR STEPS IN SELLING

## The Four Steps to Sales Success

CLOSE  
(Make 'em Buy)

DESIRE  
(Make 'em Want)

INTEREST  
(Make 'em Listen)

ATTENTION  
(Make 'em Look)

Said this story in 1928: "Here is how Mrs. Corbett is making electric refrigeration in her little 'Bright Spot' grocery pay her a comfortable income. She sells eskimo pies, milk, pop, and meat sandwiches to school children. And the sales from the refrigerator average \$35 a day." Note the old brine tank evaporator and icebox type of cabinet construction.



"The word 'soon' was the sour note in this piece of predicting by an industry pundit. Air conditioning men are still struggling hard to put over this idea."

## Says Automatic House Heating Is to Be Followed Soon by Automatic House Cooling

Possibilities Include Forced Draft Cooling Through Present Hot Air Pipes, and Gravity Systems To Be Installed in Attic

"Yes, the market for commercial refrigeration equipment did develop into one of 'almost unbelievable' proportions, and the \$500 million figure wasn't even close to the mark."

## RETAIL FOOD STORES OFFER \$500,000,000 MARKET FOR ELECTRICAL REFRIGERATION

Market statisticians who used wired homes and income tax reports as a basis for estimating the potential market for electric refrigeration equipment will have to sharpen their pencils and do some more figuring if they are to arrive at any sort of an adequate idea as to the future of the industry.

Owing to the present undeveloped state of this rich field for future expansion (commercial refrigeration), it is difficult to arrive at accurate figures which will show

the potential worth of this class of business. Considerable research has been directed toward this field in recent months, however, and the results show a market of almost unbelievable proportions. One estimate, emanating from a reliable source, places the sales value of the retail food stores market alone at a figure close to half a billion dollars. Some students of the subject believe that this market will exceed the household field in total sales volume.

### WANTED: AIR COOLERS

(An Editorial In the New York Times)

Experiments to be conducted at the University of Michigan this summer in the operation and effectiveness of new devices for cooling houses will be watched with nationwide interest. Despite the fact that until a few decades ago mankind relied on warm clothes and on open fires for heat in winter, the development of furnaces and other central heating devices has been so rapid that it is surprising so little inventive skill has been directed toward studying how to keep cool. The principal movie houses, of course, have been the pioneers in the use of air cooling systems for the comfort of the general public.

But, strangely enough, "big business," which has devoted so much attention to the health and comfort of workers during recent years, and which has supported studies of experts to determine the optimum temperature and humidity for various types of work, has taken steps only to eliminate cold.

If it is true that 68° F. is the ideal temperature for health and work, and if this is the mean sought in winter (but too often exceeded), why should not similar efforts be made to maintain it in buildings when the thermometer outdoors registers 80 to 90°?



"As new markets for mechanically refrigerated systems opened up, they were explored and described in detail."

## ELECTRIC WATER-COOLING—A BIG AND PROFITABLE FIELD FOR DEVELOPMENT

Industrial Plants, Railroad Stations, Hotels, Restaurants, Theatres, Hospitals, Office Buildings and Department Stores Offer an Attractive Market

## KEEPING THE DISPLAY CASE AT THE PROPER TEMPERATURE WITH A MINIMUM OF DEHYDRATION

Stressing the Importance of Good Insulation and Describing Two Types of Coils that Have Worked Well





"There's a lot that holds true today of some of these statements made about selling commercial refrigerators back in 1928; however, we might not go along with the thought that 'the salesman should avoid jobs which border on the impossible.'"

## Engineering Problems of Store-Display-Counter Refrigeration Outlined

### Suggests Standardization of Equipment to Permit Merchandising Through Specialty Salesmen

What differences are there between handling the sales of small commercial machines and those of the domestic unit?

The (commercial) prospect has no speaking acquaintance with B. T. U.'s and usually sees no reason why a round half dozen different types of cabinets, coolers, counters, etc., cannot be easily handled by one diminutive ice machine.

The machine manufacturer who rushes into commercial sales campaigns merely with a larger capacity machine than is required by his domestic sales department and with an inadequate ground work for this new branch of sales work is bound to meet with disappointment.

It is possible to standardize the

"Dealers were a little chary in the matter of extending credit. This fellow would go as far as 50% down, with balance in 12 months."

### Credit? Yes, But No Long Drawn Out Deal Says Colorado Dealer

The Lowell-Merservey Hardware Co. of Colorado Springs, Colo., sells electric refrigerators but not on the installment plan. Marvelous! T. A. Merservey claims that it is not necessary to offer a time-payment plan to dispose of them. Credit? Yes, but no long drawn out process of extracting the money.

The terms, according to Mr. Merservey, are at least one-half down and the balance within 12 months, as the customer desires to pay, without the requirement of a contract or mortgage or any other variety of legal document.



"New applications for mechanical refrigeration systems were being discovered daily in 1928—as they still are today."

### NEW JEWETT ICE MAKER HAS 420 CUBE CAPACITY

To furnish ice cubes in larger quantities than may be frozen in the ice trays of the average household electric refrigerator, the Jewett Refrigerator Co., Buffalo, N. Y., has brought out the Jewett ice cube maker model 88.

### PRESERVES BLOOD SAMPLES FOR STUDY IN HOSPITAL

An Oriole cabinet in the Johns Hopkins hospital, Baltimore, has two sets of doors so that blood samples put in by orderlies from the hall side can be taken out by technicians on the laboratory side.

### COPELAND KEEPS X-RAY TANK AT CONSTANT TEMPERATURE

In the X-ray laboratory of the Charity hospital, New Orleans, a Copeland Model H. compressor is connected to 100 ft. of tubing submerged in the X-ray tank.

### "Autodrink" Dispenser Electrically Refrigerated

Probably the very latest development in a use for electric refrigeration is for the Autodrink, a counter device of modernistic design with porcelain enameled stand and glass bowl for presenting fruit beverages.

### Wolverine Was There With Color

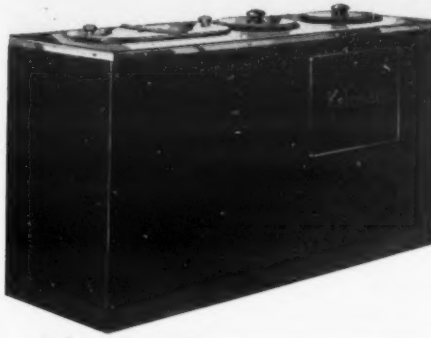
The first color advertisement to appear in the pages of ELECTRIC REFRIGERATION NEWS was inserted by Wolverine Tube Co. in the May 23, 1928, issue. The 30-in. advertisement used an orange-red shade to make vivid a picture of "the most modern annealing equipment in the industry."

"There were two points of significance in this story about the San Jose. First, it seems to be a forerunner of the present-day 'supermarket,' which traces its early developments to such food retailing establishments in the Far West. Second, it is noteworthy that six individual machines handle the refrigeration load, in contrast to one big machine."

### SIX 1 H. P. WATER COOLED MACHINES REFRIGERATE JOB

Constant Temperatures Provided For 3 Walk-in Coolers and 5 Display Cases

The A. B. C. market, San Jose, Calif., said to be one of the largest markets west of Chicago in which are handled all classes of perishable goods demanding different temperatures, including meats, poultry, fish, oysters, crabs, dairy products, vegetables, and beverages, has recently been equipped with an extensive Frigidaire system. The deal was handled through the San Jose Frigidaire office of which R. D. Thomson is manager.



The ice cream industry was one of the first fields in which the low-pressure commercial refrigeration system found a wide application, and the ice cream cabinet was in a sense the "father" of the commercial refrigeration industry. Pictured here is the first Kelvinator ice cream cabinet, a descendant of the pioneer Nizer cabinet. In 1929 Kelvinator introduced its first "portable" ice cream cabinet, another milestone in the industry's progress.



"Publication of specifications of equipment was an early editorial service offered to its readers which the NEWS has continued, when circumstances have been favorable for collecting and publishing such data, throughout the years."

## Electric Refrigeration Machine Specifications

### A Special Survey of the Principal Features of Compressor Units

# THOMAS FLYER WINS NEW YORK-PARIS RACE!



MANY of us were wide-eyed kids when the Thomas Flyer gained world-wide acclaim by winning the great international New York to Paris race back in 1908.

A few years before, the makers of horseless carriages had asked a small company named Fedders to make radiators to cool their motors. The sensational success of the Thomas Flyer proved the efficiency of this new radiator. Today, Fedders-Quigan is one of the largest independent manufacturers of automobile radiators.

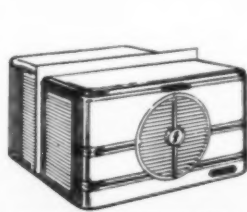
This radiator was our first adventure with heat transfer. Since then we've found dozens of new ways to push heat and cold around. With the

coming of electrical refrigeration, our engineers again pioneered with essential cooling equipment for this fast-growing industry. Today, Fedders refrigeration condensers, evaporators and unit coolers are used as component parts in millions of America's foremost household, commercial and frozen food refrigerators.

Fedders came to the rescue of a lot of parched throats when they pioneered in the development of electric water coolers. They anticipated the wide appeal for air conditioning equipment and in 1947 marketed a new room air conditioner. Today, in four short years, Fedders leads in this rapidly-expanding field.

The latest contribution to the nation's comfort is the Fedders dehumidifier—another in our ever-increasing list of products\* that truly makes Fedders—a great name in comfort! Yes, Fedders has traveled a long way in 50 years and every day alert dealers all over the country are riding with them.

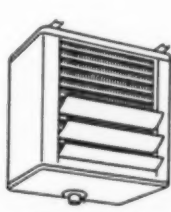
**fedders**  
A GREAT NAME IN COMFORT



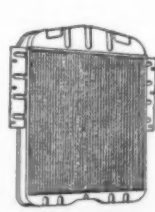
ROOM AIR CONDITIONERS



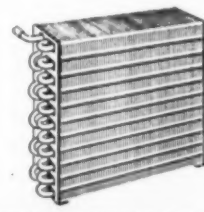
ELECTRIC WATER COOLERS



UNIT COOLERS



AUTOMOTIVE RADIATORS



REFRIGERATION CONDENSERS



DEHUMIDIFIERS

\*Fedders also makes a host of products for the heating equipment industry such as convectors, baseboard and wall radiators and unit heaters.





"Flagpole sitting was one of the zany goings-on of the Roaring Twenties. But you must admit that salesmen had the old do-or-die spirit."

### Frigidaire Salesman Climbs Flagpole To Get Order of "Shipwreck Kelley," World's Champion Flagpole Sitter

Alan Richards, Buffalo electric refrigerator salesman, "treed" his prospect at the top of a forty-foot flagpole on one of Buffalo's tallest buildings, and then climbed the pole to get his prospect's signature after making him realize the advantages of refrigeration.

Kelley called down (to Richards on the roof): "If you'll get that order up this pole I'll sign it—but I can't come down yet." Clutching the order in his teeth, Richards shinned up the pole, which swayed under the weight of the two men. Chattering with cold, Kelley signed.

#### MILESTONES

1928

NEW CONVERSION FEATURE INTRODUCED BY WELSBACH

NEW SERVEL INC. ORGANIZATION IS NOW IN OPERATION

CHARLES J. GIBSON BUYS BELDING-HALL FACTORY AT RECEIVERS SALE

The Coming of the Fountainette Self-Contained Outfit at Low Cost Widens Field For Electric Refrigeration

EXIT THE HORSE DRAWN LUNCH CART—ENTER THE ELECTRICALLY REFRIGERATED "EFFICIENCY DINER"

Forbes of Valve Firm Suggests Standardizing on 1/4 Inch Connections for Compressors

# WE SAID IT IN 1935...and it's still TRUE!

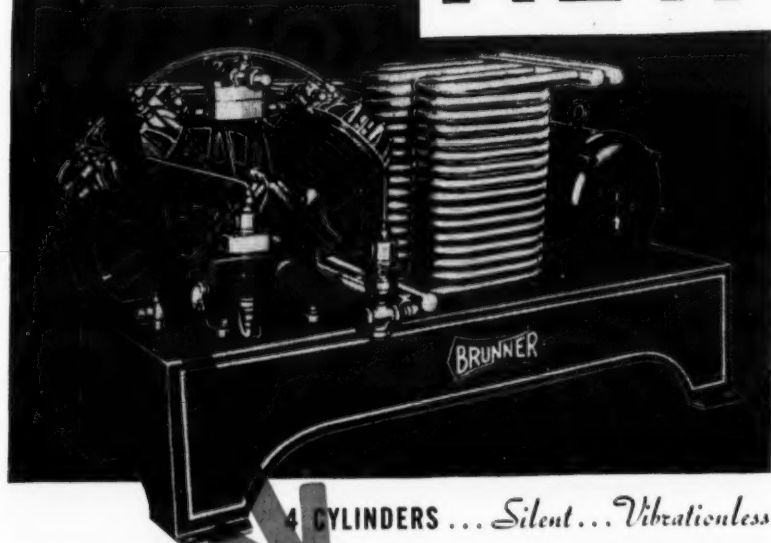
Though BRUNNER started making compressors in 1906 it was not until 1931 that we made our first serious bid in the refrigeration market. When this advertisement appeared in the February 6, 1935 issue of the News the BRUNNER line consisted of 8 compressors ranging in capacities from 1/4 HP. to 10 HP. for 41 refrigeration applications. Factory and office were housed in one building. Today the BRUNNER line consists of 69 models of Refrigeration Condensing Units in capacities from 1/4 HP. to 75 HP., plus a popu-

lar line of Air Conditioning Units. A quarter million square feet of manufacturing space in Utica and Newark are already becoming crowded with the men and machinery needed to keep up with the *continually growing demand* for BRUNNER products. *And this is just the beginning.* BRUNNER's Research Laboratory, always ahead of the trends, has many new developments at the testing stage. BRUNNER management is alert and progressive. They know your problems. Their eyes see the present but are also on the future.

**WE REPEAT** again what we have been saying...and living up to...for a good many years: "BRUNNER is the Fastest Growing Name in the Industry."

This year after year preference for BRUNNER can mean a lot to your future too. That's why we call your attention again to one of our current advertisements at the right.

Radically **NEW**



4 CYLINDERS... Silent... Vibrationless

1935's CONTRIBUTION TO REFRIGERATION by the **FASTEST** Growing Name in the Industry

Here's the dependable way to handle big commercial jobs—install these NEW Brunner units. Radically new in dependability and design, with improved 4-cylinder compressors, the 1935 commercial models set a new standard for heavy-duty performance. Quieter... smoother in operation... more efficient. In a range from 3 H. P. to 10 H. P. Get complete data on these new water-cooled units—and on the complete Brunner line: 8 compressor models and 41 high-sides for every refrigeration need. Brunner Manufacturing Co., Utica, N. Y., U. S. A.

NEW CATALOG NOW READY...WRITE!

**Brunner**

A NAME BUILT BY 29 YEARS OF SERVICE

**BRUNNER**  
SINCE 1906

REFRIGERATION helps you serve better

There are just two steps to closing more business

THE FIRST STEP IS—use this coupon

Just fill it in and mail it

We will know this is your request for a Brunner factory representative to stop in and go over the reasons why Brunner dealers find it easier to close business.

Name

Company

Address

City and State

With all the facts fresh in mind you will recognize the second step—recommend and install Brunner's from now on. With 69 models comprising a complete range of commercial capacities and types, a

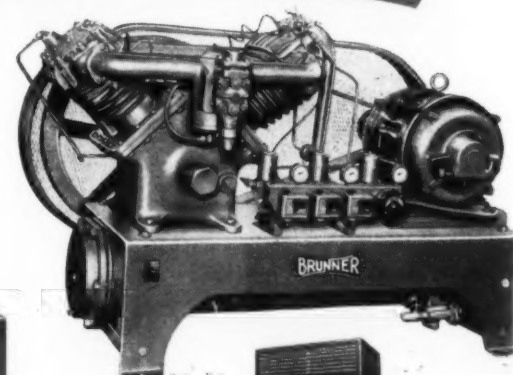
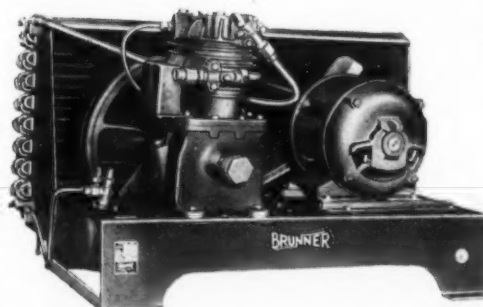
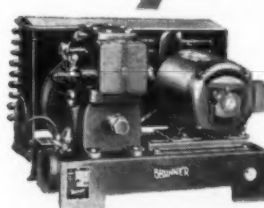
dependable source of supply and a known product with ready acceptance by your customers, selling obstacles are removed and you are on the way to bigger business. We will be looking for the coupon.

BRUNNER MANUFACTURING COMPANY  
Utica 1, New York, U. S. A.

REFRIGERATION  
CONDENSING UNITS

...a size and type for every purpose

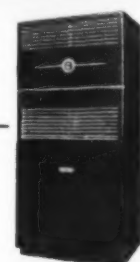
AIR AND WATER  
COOLED MODELS  
1/4 HP. to 75 HP.



**BRUNNER**  
SINCE 1906

AIR CONDITIONING

Self Contained Units in 4 sizes: 3-5-7 1/2 and 10 HP.  
Remote Installation Types from 3 to 75 HP.



STYLES, HABITS AND NEEDS change with the years but when it comes to *buying* folks still look for the basic values in a smart equipment purchase; i. e....dependability, economical operation, full rated capacity, efficient service, lasting usefulness, fair price and all supported by confidence in the manufacturer.

You can't get away from the fact that it took a lot of well satisfied customers to put **BRUNNER** on top...AND KEEP THEM THERE!



# *“Where is everybody?”*



**Don't stop us** if you've heard this. We've got a *new* point to the story.

*Once upon a time an ostrich was invited to a party. The last one to arrive, he came rushing up to find all the other ostriches with their heads in the sand. Completely bewildered, he looked frantically around, shouting, "Where is everybody! Where is everybody?"*

The new point to this old gag is this . . .

It's awfully easy for an industry or a company to stick their respective heads complacently in the sand and not even realize they're doing it. Especially at 25th Anniversary parties. We doubt if the Refrigeration Industry or "Air Conditioning and Refrigeration News" is going to do that.

We think probably everybody will pat everybody

else on the back and congratulate each other on the terrific job that's been done . . .

And then turn right around and work like blazes to be first with something the other guy hasn't thought of!

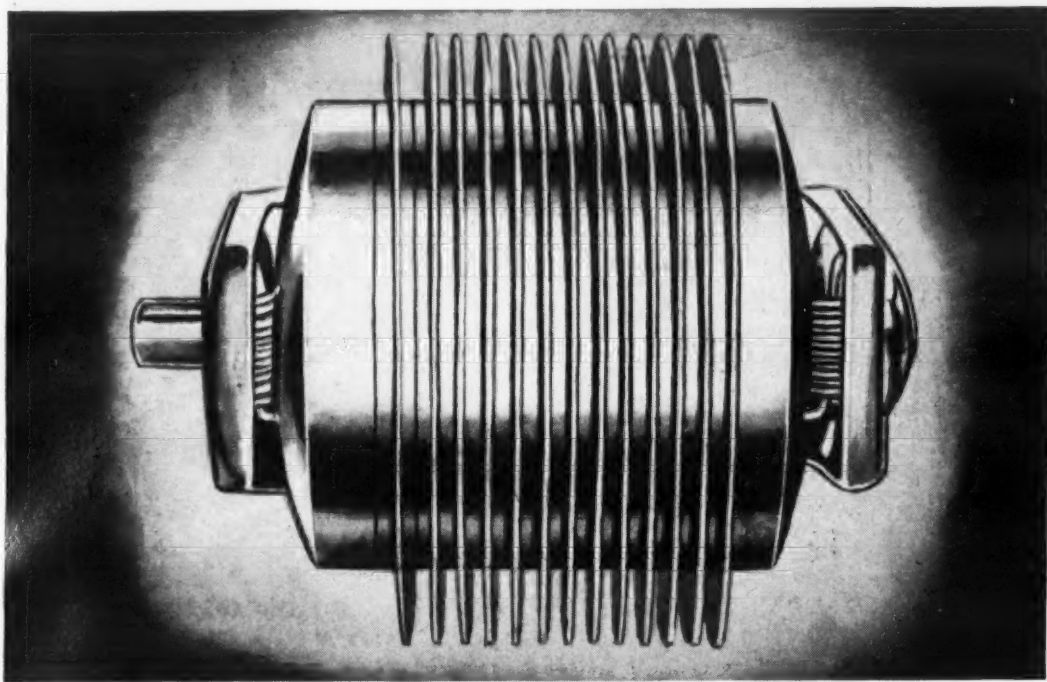
General Electric is planning a 25th Anniversary soon. We're going to celebrate it with a "where-do-we-go-from-here?" party. Of course, we'll pat each other on the back and point with pride to all the G-E "firsts" like the samples you'll find on the next few pages.

But if we're going to set the same kind of record in the industry in the *next* 25 years that we did in the last . . .

And we *are*!

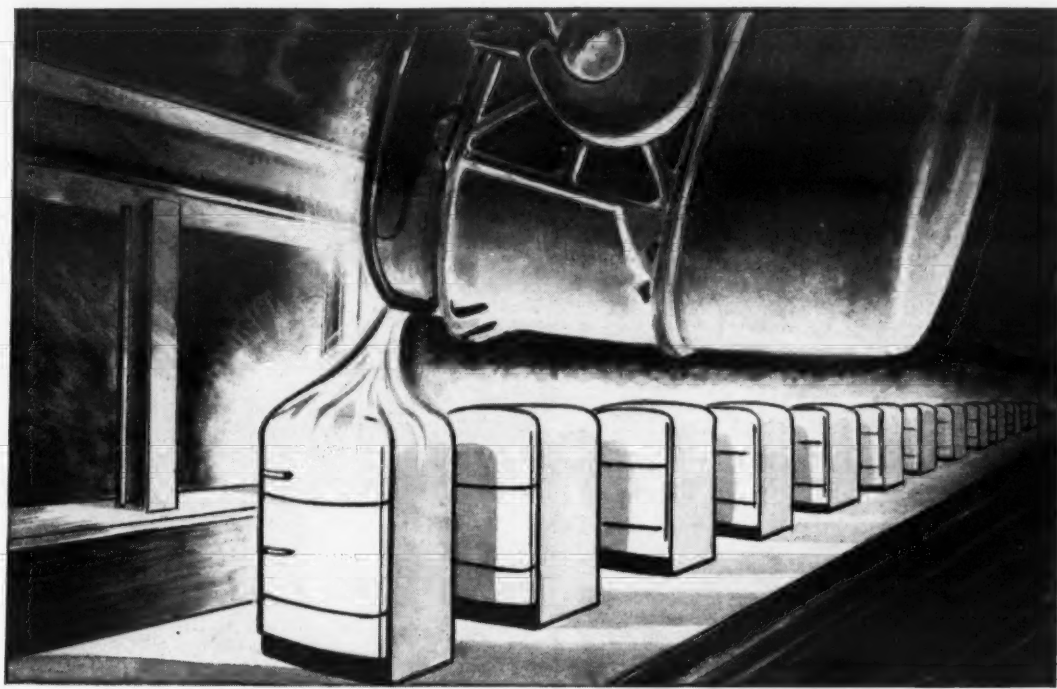
We'll turn right around and get to work . . . *pronto!*





## 1<sup>ST</sup> 1927 WITH SEALED SYSTEM

The General Electric mechanism is sealed in the steel casing to protect it from air, dirt, and moisture. It never requires oiling, many service calls are eliminated.



## 1<sup>ST</sup> 1927 WITH ALL-STEEL CABINET

General Electric was the first in the industry to adopt the all-steel cabinet. Longer life was assured for the refrigerator because there was no wood to warp or rot.

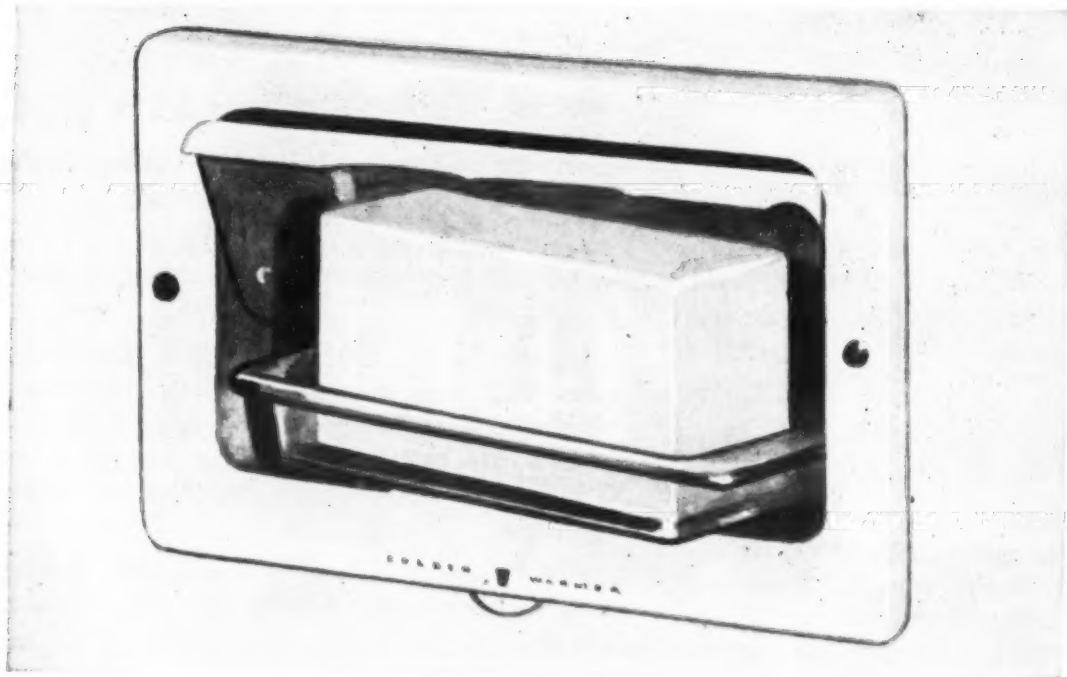
# A few of the many Famous G-E of the

**I**T IS THE SIMPLE TRUTH that for years General Electric has been constantly in the lead with famous and important refrigeration "firsts" . . . improvements and new conveniences that help make today's dependable General Electric Refrigerators the finest ever built.

A few of the many General Electric "firsts" are shown here.

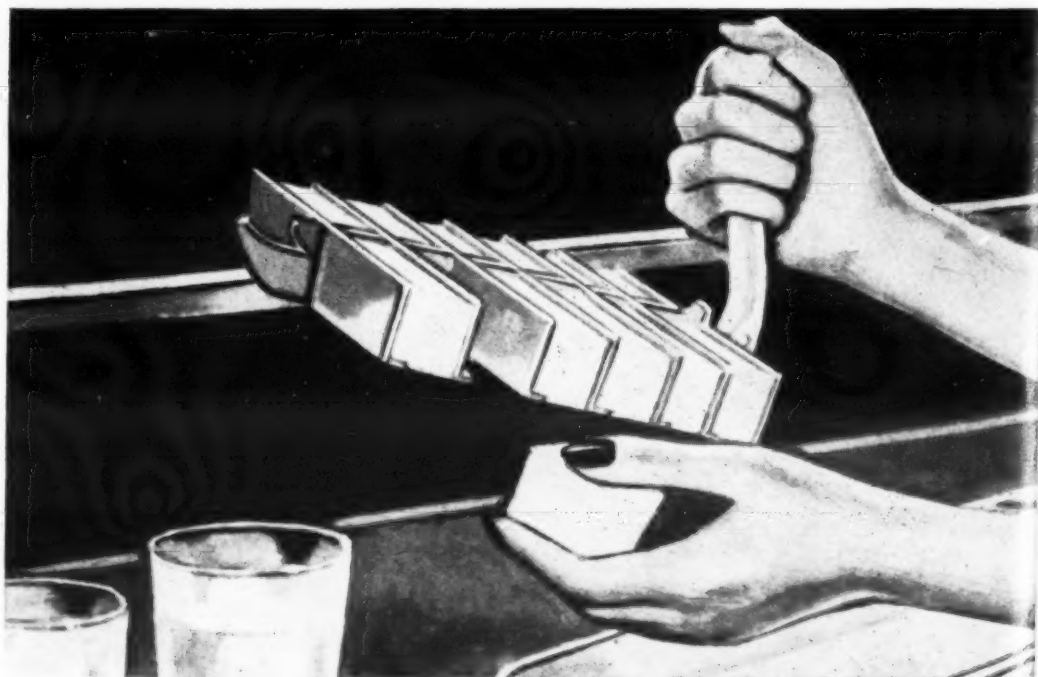
### Another most important feature

You will agree, we believe, that today the most important feature in any refrigerator is *dependability*. Let's look at



## 1<sup>ST</sup> 1941 WITH BUTTER CONDITIONER

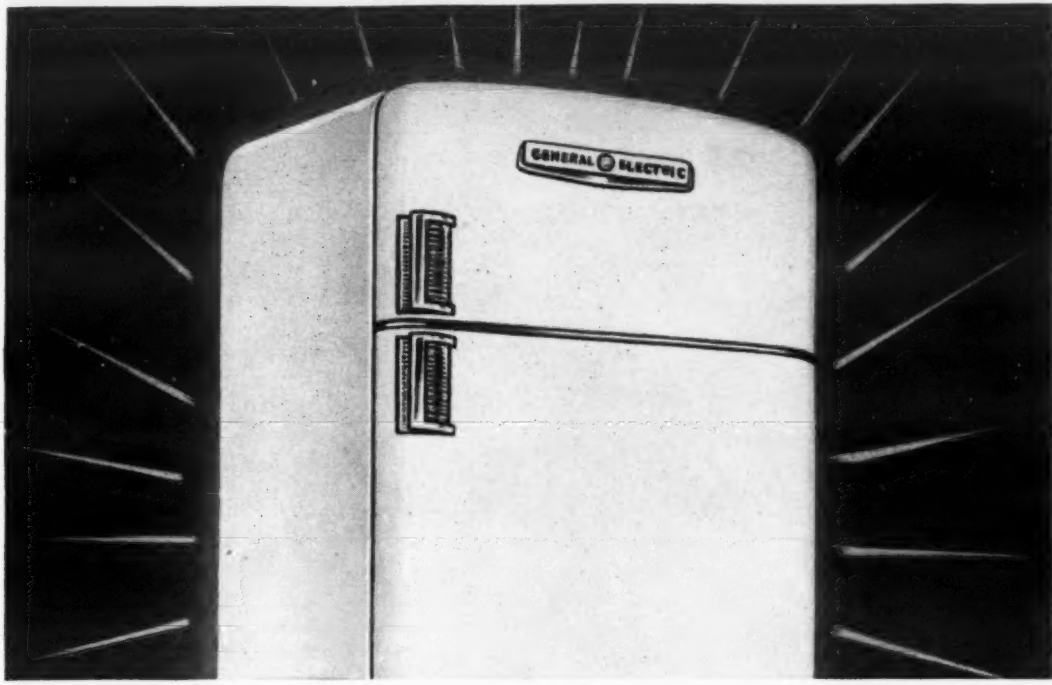
This butter conditioner is built right into the refrigerator door. Temperature can be regulated to keep butter at whatever spreading softness is desired. Holds up to one pound.



## 1<sup>ST</sup> 1950 WITH REDI-CUBE ICE TRAYS

Lever releases all cubes at once, yet keeps them free on divider-rests so that they may be picked singly, or in quantity. Remaining cubes—undisturbed—are easily replaced in tray.





## 1<sup>ST</sup> 1931 BAKED ENAMEL FINISH

The baked-on enamel finish on bonderized steel is vastly superior to ordinary lacquers. This gleaming-white finish resists stains, is so easy to keep clean.



## 1<sup>ST</sup> 1934 WITH 5-YEAR PROTECTION PLAN

General Electric was first, also, to offer the 3-year warranty, and before that the 2-year warranty. The General Electric Refrigerator is utterly reliable.

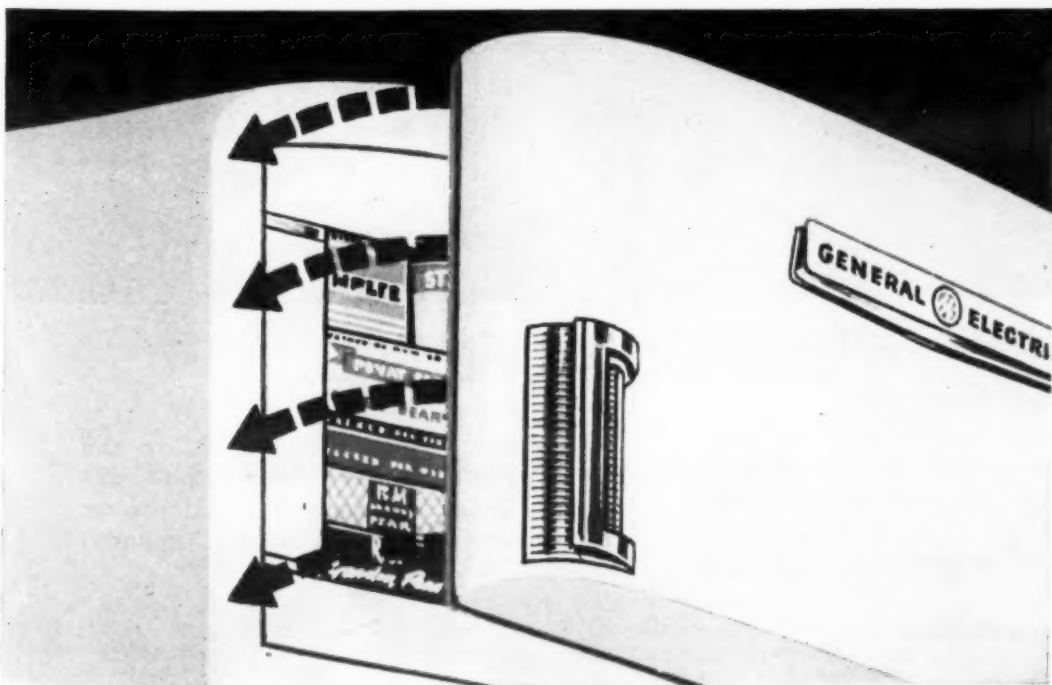
# "FIRSTS" past 25 years

the General Electric record for efficient service.

Just think! *Of the many millions of General Electric Refrigerators made, more than 2,700,000 are still performing faithfully after 10 years. Many for 15 and 20 years, and longer!*

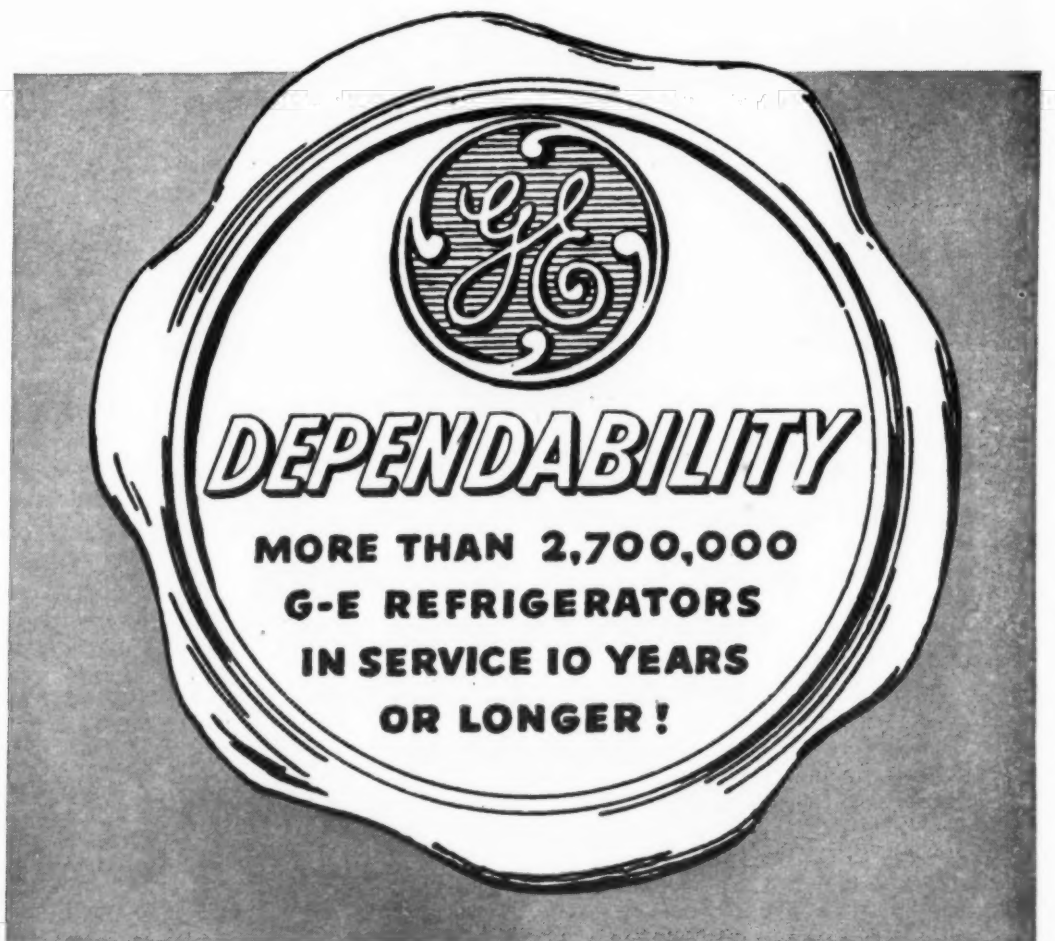
Of all the refrigerators ever made, not one can surpass General Electric's famous record for year-in and year-out, dependable service.

General Electric Company, Bridgeport 2, Connecticut.



## 1<sup>ST</sup> 1950 WITH ALNICO MAGNETIC DOORS

Door closes so easily, so quietly. General Electric alnico magnets, concealed inside the door gasket, grip the door shut. Temporarily discontinued because of defense production.







**1<sup>ST</sup>**  
1947

## SUCCESSFUL COMBINATION REFRIGERATOR—FOOD FREEZER IN ONE CABINET

The large Food Freezer has its own separate door, its own separate refrigerating system, and its own temperature control.

It's not a short-time storage compartment for frozen foods. In it, foods can be stored safely for up to a year, for this freezer main-

tains safe, zero-degree temperature.

**The De Luxe Refrigerator.** The fresh-food compartment also has its own separate door, its own separate refrigerating system, and its own temperature.

In this fresh-food compartment, moist cold

keeps foods garden-fresh day after day.

No other appliance made, we believe, can quite compare with the efficient, dependable General Electric Refrigerator—Food Freezer Combination. General Electric Company, Bridgeport 2, Connecticut.

*You can put your confidence in—*

**GENERAL**  **ELECTRIC**



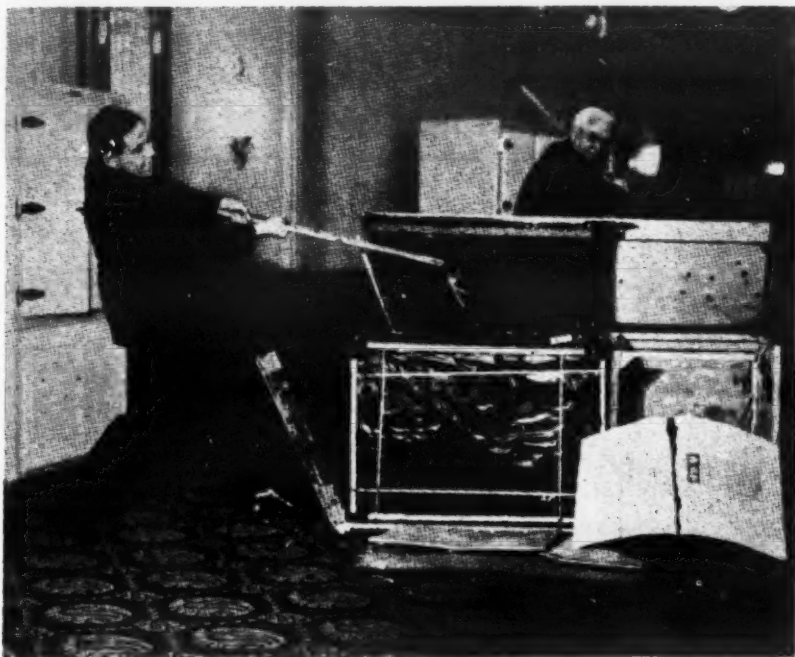
"Forced-draft unit coolers come into the picture as a further step in the progress of commercial refrigeration."

## VILTER ACHIEVEMENT IN 1928 THE FORCED DRAFT AIR COOLER

Marked Success in Adapting  
Ammonia Compressors to  
Methyl Chloride

By Emil Vilter, President,  
The Vilter Mfg. Co.,  
Milwaukee, Wis.

Among the most forward of our achievements during 1928 has been the Vilter forced draft cooler, a simple and yet entirely successful method of providing refrigeration for any type of box or cooler, using thereby a minimum of piping and accessory equipment, but so arranged as to permit its functioning with the maximum of efficiency. Installed in butcher shops, coolers, counters, or other places, the forced draft air cooler is adaptable to any temperature and may be controlled with the greatest accuracy through the use of thermostatic devices.



The young gentleman at the left is none other than V. E. "Sam" Vining (now of Westinghouse), then sales manager of Servel Sales, Inc., taking a few sledge hammer whacks at a refrigerator which he used to illustrate a sales demonstration showing the "ruggedness" of the product. Huskiest dealers and salesmen were invited to wreck the cabinet. Sam and E. A. Cressey, vice president of C. C. Harvey Co., Metropolitan Boston Servel distributor, took over where the four huskiest left off.

## Copeland Develops New Type of Commercial Cooling Unit

Installation of all Copeland refrigeration equipment in the large kitchen of the newly completed Down Town Club, Penobscot Building, Detroit, has revealed for the first time a new type of cooling unit which Copeland has developed—a special fin evaporator type, housed in a box 18 by 18 by 18 in. This cooling unit prevents dehydration of the air in the box through the use of a small fan which keeps the air in constant circulation.

"Some of the association activity was beginning to take form to help both the user and the seller of refrigeration products."

## COMMITTEE SUBMITS TEMPERATURE SCALE FOR REFRIGERATORS

Commercial Box and Machine  
Makers Assert Present Usage  
Is Economical

Reporting for a Conference Committee of the Commercial Refrigerator Manufacturers at the meeting of the association held in Detroit Jan 21 and 22, R. E. Ottenheimer, chairman, announced that arrangements had been completed for a permanent body to be known as the Joint Commercial Refrigeration Committee representing the Commercial Refrigerator Manufacturers and the Refrigerating Machinery Manufacturers' Association with A. H. Baer, of Waynesboro, Pa., as chairman. Important among the activities of the conference committee under the chairmanship of Ottenheimer has been the development of a scale of recommended temperatures for commercial refrigerators and coolers adopted by the Commercial Refrigerator Manufacturers at its meeting in October, 1928, and also adopted by the Refrigerating Machinery Manufacturers' Association.



"Refrigeration played a big part in the trend of retail food merchandising to what was then termed a 'food department store' and which we now know as a 'supermarket.'"

## How Electric Refrigeration Is Changing the Status of The Retail Grocery Merchant

Specialty Stores Are Being Replaced by Food  
Department Stores in Southern California

By Geo. R. Lindahl, General Sales Mgr.,  
Commercial Refrigerator Mfg. Co.,  
Los Angeles, Calif.

Prior to the advent of electric refrigeration, when people wanted meats they went to a butcher shop. When they wanted groceries they went to the grocery store. When they wanted baked goods, fruits, or delicatessen goods they went to the stores that specialized in these commodities.

The specialty food stores are rapidly being forced out of business. Starting in Southern California about 15 years ago the grocer added

fruits and vegetables, delicatessen and bakery products. About ten years ago he started to add meats. Today about 90% of all grocers in Southern California maintain a complete food department store. The individual butcher shop has almost completely disappeared. The individual delicatessen is going fast. Outside of a few of the "chain" bakeries it is almost impossible to find the regular old time bake shop.

"The independent serviceman was beginning to take his place in the industry."

## Independent Installation and Service Organizations Enable Dealers To Cut Overhead Costs

By Frank W. Gray, Absopure Refrigeration Corp.

In larger cities where electric refrigeration is merchandised on a big scale there has developed a need, and corresponding opportunity, for the organization of companies whose activities are solely devoted to installation and service.

The time has passed when men trained in the installation and service of one make of electric refrigeration system are thought incompetent to service any other. In fact, service men constantly drift from one organization to another these days, following the trend of plentiful work and higher pay. Most of these men are equipped by experience to service almost any make of electric refrigerator, and certainly to do any kind of installation work under proper supervision.

"Here's an idea that lay dormant for awhile, but eventually came into its own."

## ICELECT CORP. DESIGNS NEW TYPE OF EVAPORATOR FOR COMMERCIAL JOBS

Made Up of Two Corrugated Cylinders, One Inside the Other

The Icelect Corp. of Omaha, has designed and developed a new type of evaporator for commercial installations such as ice cream cabinets, meat counters and cases, and other types of refrigerators used in grocery stores or meat markets.

The evaporator is made of two corrugated cylinders, one inside the other, and the space between the two cylinders contains refrigerant.

"The thermostatic expansion valve emerged to provide better control of the refrigerant and to open up new fields for refrigeration and air conditioning."

## UNIVERSAL COOLER TO OFFER PATENT VALVE TO ENTIRE INDUSTRY

By G. M. Johnston, V. P. & Gen. Mgr.,  
Universal Cooler Corp.,  
Detroit, Mich.

The development of our patented thermostatically controlled expansion valve, we consider, from an engineering angle to be our greatest achievement during the past year, its simplicity of operation and adjustment being most outstanding.

The established policy of our company is to co-operate to the fullest extent with other members of the refrigeration industry, and having this in mind, it is our intention to make this thermostatically controlled expansion valve available to the industry as a whole.

"Oh, there was dirty selling in those days that was real dirty."

## SALESMAN PLEADS FOR COMPETITION ON A CLEAN BASIS

Points to Unfair Use of Certain  
Advertisements

Letter to the Editor:

A recent advertisement showed a photo of a man wearing a gas mask, with wording to the effect, "Protect your service men from (the refrigerant) with (the make) respirators."

Quite a strong ad to say the least! Is it necessary for me to state that I know of persons who have clipped this ad solely to use it against the refrigerant? Such procedure is almost taken for granted.

And what stories will be woven around that ad. "Yes, madam, if you wish to buy a machine containing that refrigerant it would be best to have a gas mask handy for each member of the family." And the sad part of it all is that the salesman is almost forced to use such tactics because of similar ones pursued by his competitors.



"This patent suit pretty well opened up the field for air-cooled condensing unit design. It was reported in great detail in the NEWS, and reprints of the testimony were sold for many years."

## FRIGIDAIRE LOSES PATENT SUIT

General Necessities Corporation Wins  
Long and Expensive Legal Battle Involving  
Basic Features of Domestic Machine

## WOLF PATENT DECLARED INVALID PLAINTIFF DROPS OTHER CLAIMS

Patent litigation involving such important features of the domestic electric refrigerator as air cooling, the assemblage of the motor, compressor and condenser on a common base, the location of the compressor unit underneath the food compartment, and other elements of design being used by many manufacturers of electric refrigeration equipment, was brought to a close Saturday, March 23, when Judge Arthur J. Tuttle in the District Court for the Eastern District of Michigan, at Bay City, Mich. declared invalid patent No. 1337175 originally granted to Fred W. Wolf, April 13, 1920.

"Warranties on refrigeration systems were just approaching the state where they might become an 'issue.'"

## UNIFORM WARRANTY APPROVED BY NEMA

WASHINGTON, D. C.—Adoption of a uniform warranty as recommended practice for manufacturers of electric refrigerators to include in a guarantee bond or as part of a conditional sales contract was among the outstanding results of the meeting of the Refrigeration Division of the National Electrical Manufacturers Association held here.

"Publication of patents of interest to the refrigeration field was inaugurated by the NEWS in 1929 and has been continued on since that time."

## Refrigeration Patents Announced



"The promotion departments of the manufacturers were busy thinking up new tricks to get over the sales story."

## A Sugar Sack Carries Kelvinator's Message to the Grocer

"Figure it out for yourself," printed on an ordinary sugar sack is used by Kelvinator Corp. in sending a message to the grocer. The sack is folded so this is on the outside together with the mailing address. When unfolded the remainder of the sack carries the story of what one grocer saved by installing a Kelvinator electric refrigerator.

"Room coolers come into the air conditioning picture. This particular one was a water-cooled console type."

## ROOM COOLER, COLD CONTROL ANNOUNCED BY FRIGIDAIRE CORP.

An electric room cooler, a cold control providing six freezing speeds in the ice trays of household models, a smaller household model with factory price of \$170 and a new line of electric water coolers are announced by Frigidaire Corp.

"The room cooler marks the entry of the small mechanical refrigeration unit into a new field," President E. G. Biechler said. "In experimental tests it has lowered the temperature in an average size living room or office as much as 10° in 30 minutes. The height of the room does not affect its capacity, as the temperature of only a few feet of air near the floor is affected by its operation."

Humidity of the room is also lowered to a marked degree which makes it of particular value in many climates during summer months. The cooler is approximately four ft. high and weighs 210 lbs. It operates with a fan that circulates 450 c.f.m. over cooling coils through which the refrigerant is pumped by a small motor.

## KELVINATOR OFFERS 12 NEW 1930 MODELS

Ice-O-Thermic Tubes for Quick  
Freezing Work Automatically

DETROIT—Ice-O-Thermic tubes, which give automatic quick freezing, are the outstanding development in Kelvinator's 1930 line of electric refrigerators which will be announced to the public over a nation-wide radio hookup.

The Ice-O-Thermic tubes automatically concentrate the entire refrigerating force of the unit in the coils, which completely surround the bottom ice tray.

The tubes function for quick freezing of ice cubes and desserts without affecting temperatures in the other compartments of the cabinet. They automatically change the temperature as the freezing load is increased or decreased.



Kelvinator water coolers replaced the water bucket in the players' and visitors' dug-out and in each of the dressing rooms of New York American Baseball Park in New York City in 1929. Shown is Yankee infielder Mark Koenig refreshing himself at one of the new coolers in the dressing room.



# SERVEL CELEBRATES ITS SILVER



Presenting  
the amazing new

## ELECTRIC SERVEL

**SERVEL'S FAMOUS NO-MOVING-PARTS FREEZING SYSTEM  
IN A REVOLUTIONARY NEW REFRIGERATOR THAT STAYS  
SILENT—LASTS LONGER.**

Electric Servel is the most sensational news to hit the refrigerator industry since the Servel Gas Refrigerator made its bow a quarter of a century ago!

Great strides have been made in the refrigerator industry since 1926. And Servel—years ahead of its time right from the start—has been a leader for all 25 years. Today only Servel makes refrigerators that use all three sources of power . . . gas, electricity and kerosene. Further proof of Servel's leadership is the more than 3,000,000 Servels now in operation all over the world.

And now Servel celebrates its Silver Anniversary with this

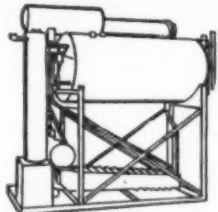
golden opportunity for you. Servel offers its famous long-lasting freezing system in a refrigerator that simply plugs in! An electric refrigerator without a motor. No machinery to break down—not a single moving part to make even a whisper. And like all Servels, it has a Ten-Year Warranty on the freezing system—the world's longest refrigerator guarantee.

Electric Servel has all the convenience features, all the beauty and all the efficiency that 25 years of experience and intensive research can give a refrigerator. For details write Servel, Inc., Dept. Q-19, Evansville 20, Indiana.

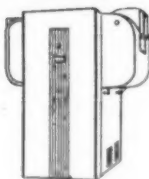
### SERVEL ALSO MANUFACTURES THESE OUTSTANDING PRODUCTS AND APPLIANCES



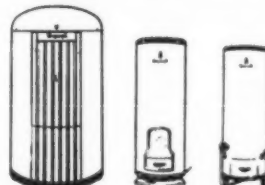
**Self-Contained Air Conditioning Unit**—For commercial and other spaces where no ducts are needed. Five tons of refrigeration with heating equipment optional.



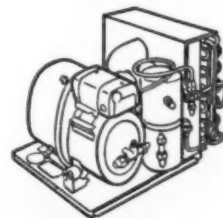
**Servel 25-ton Water Chiller**—Operates on steam from any source, even waste heat. For air conditioning large buildings, or chilling water for industrial uses.



**All-Year Air Conditioner**—Operates on famous Servel absorption system. 3- and 5-ton sizes for commercial and residential use . . . summer and winter.



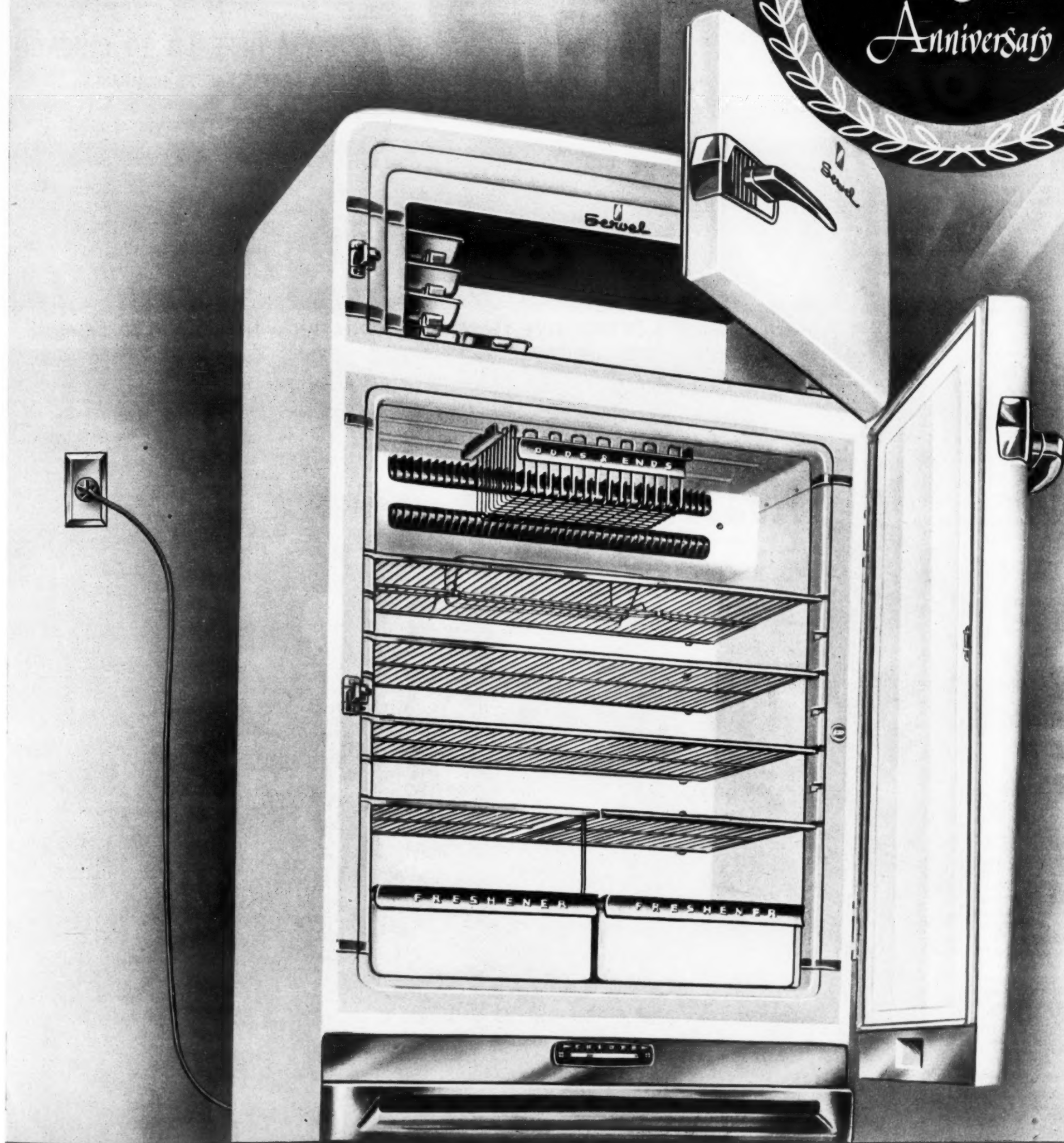
**Servel Gas Water Heaters**—A type available to meet every demand. These units provide faster, more economical water heating at all price levels.



**Servel Supermetric Units**—Compact, simple to install, low in maintenance cost. "Forced-feed" lubrication system means longer, trouble-free service.



# ANNIVERSARY TOO!



# Serwel

EVANSVILLE 20, INDIANA





"Manufacturers and dealers were beginning to discover that the application of refrigeration equipment brought about a need for proper engineering of installations, and hence the development of proper information for field selling forces."

## An Explanation of the Effect of Air Circulation on the Refrigeration of Meat Size, Location and Design of Flues and Bunker Compartment Control Circulation and Regulate Humidity

By Gerald S. Bataille

Director of Application, Harry L. Hussmann Refrigerator Co.

"Mechanical refrigeration was beginning to find its place, too, in industrial applications."

### World's Largest Film Developers Use Kelvinator to Maintain Exact Temperatures in Solutions

Among the unique and unusual uses to which electric refrigeration has been applied is that in the plant of the Fox Co., San Antonio, Tex., where a Kelvinator system, designed for cooling ice cream, has been installed for cooling the water in which films are developed. The Fox Co. is the largest company in the world developing and printing camera and kodak films.



"They had lucrative prize contests even in those days. Wonder if that third-prize winner still has the \$2,000 in gold."

### Home, Cadillac Coupe, and Gold Prizes In Contest

To set the nation thinking on the vitally important topic of proper food preservation—to glean new facts and figures concerning food preservation, in guarding health, and preventing economic waste, the National Food Preservation Council offers prizes to the value of \$25,000 for the best essays in a National Idea Contest.

The capital prize is a new home, costing more than \$10,000; second prize is a 1930 five-passenger coupe selling at \$3,595; the third prize \$2,000 in gold.

"A great deal of time and money was spent on cooperative efforts to sell electric refrigeration. Such efforts helped build the industry's volume."

### CITIES BEING ORGANIZED FOR 50° DRIVE

Streaming across facing pages in seven national publications, the advertisements of the National Food Preservation Program will invite more than 14,000,000 families to participate in the \$25,000 essay contest being sponsored cooperatively by the National Electric Light Association, the manufacturers of electric refrigeration systems and accessories, the public utility companies and a score or more of other national trade associations.

It is expected that more than a million people will learn why all year refrigeration safeguards health in order to qualify for writing their essays on "Why Fifty Degrees Is the Danger Point."



"There were some experiments going on then in frozen food retailing which haven't reached full realization yet today."

### PACKAGED MEAT

Utilizing a new quick-freezing process, Swift & Co., Chicago packers, are now marketing fresh meats in packages. Until the invention of this quick-freezing process, only cured meats such as ham and bacon could be sold in package form.

Among the meats now sold with a Swift trade-mark branded on them are lamb chops, pork chops, pork tenderloin, sliced calf liver, and legs and shoulders of lamb. In the near future the Swift line will include beef steaks, roasts, and chopped-up lamb for lamb stew.

## 1929

"This is recorded as being about the first mention of mechanically refrigerated trucks in the NEWS."

### ELECTRIC COOLING SOLVES ICE CREAM TRUCK PROBLEM

Meyer Body Co., Buffalo, offers electrically refrigerated ice cream motor truck bodies adaptable for 2 and 2½-ton chassis.

These bodies contain three compartments: the compartment in front running across the body contains, on the left side, the generator system for generating the current, consisting of gas engine, generator and battery starter.

The condenser coils, automatic temperature regulator, compressor, and motor for driving compressor are on the right side of the body in the same compartment. The machine has an air cooled condenser.

A self-contained Frigidaire unit is used.

Major Howard Blood (left), Norge chief executive for many years, explains the action of the Rollator compressor mechanism to the late Robert L. Ripley (center), author of "Believe It or Not," and the late George Borg, board chairman of Borg-Warner Corp. Norge became a factor in the household refrigerator field in the late twenties, putting heavy emphasis on its rotary compressor.



"The 'Chicago Code Battle' marked the first real effort to work out a local refrigeration ordinance that would cover the developments brought about by the increasing use of low-pressure mechanical refrigeration systems."

### MODEL CODE IS OFFERED TO CHICAGO SPECIAL COMMITTEE DRAFTS SAFETY ORDINANCE TO MEET DEMANDS OF CITY COUNCIL

# Tyler—first with every

TWENTY-FIVE YEARS OF ENGINEERING AND ADVANCED DESIGN

## 1935 Welded Steel

Tyler revolutionized the industry back in 1935 with the first welded-steel meat display case. Today's Tyler automotive-type welded-steel construction—still far ahead of the industry—employs precision jigs and fixtures for absolute uniformity. Perfect alignment in continuous installations is maintained by the Tyler TRU-LINE LOCKING DEVICE which draws cases together in rigid alignment and prevents sagging!

## 1937 Sectional Coolers

Tyler originated the sectional, metal-clad Walk-in Cooler for bulk storage of meats, produce, etc. Easily enlarged by addition of new units as needs increase.

## 1948 High-Level Refrigeration

Tyler forced air circulation to all display areas, eliminated necessity for canopies, and assured uniform temperatures throughout display areas. Adjustable shelves.

## 1950

### Multi-Deck Meat Cases

Tyler pioneered the multiple-deck open meat case for maximum cubic foot capacity per square foot of floor space. Especially important under today's conditions!

TYLER FUTURE CORPORATION, NILES, MICHIGAN  
Tops in commercial refrigeration!

**TYLER 25 YEARS** First with Better Refrigerators



**MILESTONES TRENDS IN THE PAST 25 YEARS  
FOR COMPANIES, INDIVIDUALS, AND****1929****LIQUID COOLER CORP.,  
DETROIT, ANNOUNCES  
WATER COOLING UNIT**

Announcement is made of the first of a new line of liquid coolers by a new concern, the Liquid Cooler Corp., Detroit, organized by Herbert C. Kellogg.

According to the announcement this unit makes it possible to build the complete cooling system into the drinking fountain.

The principle of heat transfer employed is of the direct or instantaneous method. The coil containing the drinking water is surrounded by the liquid refrigerant. The coil surface has been carefully calculated to accomplish the cooling of a volume of water which will adequately supply a single jet and properly maintain any desired exit temperature.

**General Electric  
Announces the New  
All-Steel Model**

A new all-steel refrigerator of a size suitable for apartments and small homes was announced to the public through national advertising by the General Electric Co. on March 21. The new model is presented as the first all-steel electric refrigerator, the joints being electrically welded and the hardware being firmly joined to the steel body.

**LOUIS RUTHENBURG  
MADE PRESIDENT OF  
COPELAND PRODUCTS**

Has Headed Various Divisions of  
General Motors Since 1912

**WAGNER ANNOUNCES A  
NEW RUBBER MOUNTED  
REFRIGERATION MOTOR**

Wagner Electric Corp. of St. Louis announces a repulsion-induction non-radio interfering, rubber-mounted motor—a new development in refrigeration motor design, designed especially for the electric refrigeration industry.

**SILVER SOLDER USED  
TO INSURE GOOD JOINTS**

Silver solders, which have recently been standardized by a producer of silver—Handy & Harman, New York City—are now being used by many manufacturers of electric refrigerators. They are used principally on copper coils and other copper or brass connections. The various compositions flow at from 1325 to 1600° F.



SELF-SERVICE FOOD stores were just beginning to make their appearance in 1929. The only self-service refrigerated fixture in this market was the reach-in dairy case visible in the rear. Barely discernible beneath the first check-out counter are the peach baskets that customers used to carry on their arms as they selected their groceries, in contrast to the rubber-tired carts in use today.

**Esco Milk Cooler  
Exhibited at Show****SWEDISH INTEREST  
IN ELECTROLUX IS  
ACQUIRED BY SERVEL**

EVANSVILLE, Ind.—Servel, Inc., has purchased the entire Swedish interests in patent rights to the Electrolux absorption refrigerator in the United States, its possessions, Cuba and Canada.

In addition to acquiring the patent rights, Servel, Inc. obtains rights to any future developments in refrigeration and any patents resulting therefrom, which may originate through the Swedish interests in their several laboratories in Stockholm, London and Berlin.

**PRODUCTION OF TEMPRITE  
COOLER TO START SOON**

DETROIT—Production of a new beverage cooling model will start as soon as manufacturing machinery can be set up, according to an announcement made by Liquid Cooler Corp.

J. Lyons & Co. which controls 270 restaurants in England, has ordered a quantity of the new beverage cooling models for the purpose of cooling soda water and beer.

**NORGE ACQUIRED BY  
BORG-WARNER CORP.****NEW RANCO CONTROL  
SWITCH ANNOUNCED**

The Automatic Reclosing Circuit Breaker Co., Columbus, Ohio, announces a new and improved model of Ranco control for 1929 production. This thermostat control is designed especially for use on household refrigerators and provides for easy mounting and servicing.

**WESTINGHOUSE FORMS  
REFRIGERATION DEPT.****KEROTEST COMPLETES  
ADDITION TO PLANT**

PITTSBURGH—Kerotest Mfg. Co. has just completed extensive additions to its plant. The company manufactures forged brass valves, fittings, manifolds, and connections for the electric refrigeration industry.

A novel feature employed in the company's packless valves is the use of monel metal diaphragm, flexed to assume a normal position without strain when the valve is in the entirely open position.

Kerotest was a pioneer in the manufacture of apartment manifolds, made on square outside and round inside seamless brass tubing with compact angle needle-type valves screwed and soldered into ports placed 2 in. apart.

**HUSSMANN, LIGONIER  
AND STEINER MERGE**

The Harry L. Hussmann Refrigerator Co., St. Louis, Mo., has consolidated with the Ligonier Refrigerator Co., Ligonier, Ind., and the Steiner Mfg. Co., St. Louis, to form a corporation with assets of approximately \$3,000,000 for the manufacture and distribution of complete market, grocery and delicatessen equipment.

The new company will be known as the Hussmann-Ligonier Co., and has been incorporated under the laws of Delaware with John E. Riley as president.

# major design improvement!

ACHIEVEMENT ARE OF IMPORTANCE TO TYLER REPRESENTATIVES AND THEIR CUSTOMERS

Check this list against competition! date for date—improvement for improvement!

**1944****Frozen Foods**

Tyler took frozen foods out from under the "manhole covers" of antiquated cases, with the first open Frozen Foods Display Case. Available with high or low canopy.

**1947****Automatic Defrost**

Tyler Automatic Defrost with blower coils set a new standard of operating efficiency for open cases, eliminated hand defrosting and deterioration of merchandise.

**1948****New Flexibility**

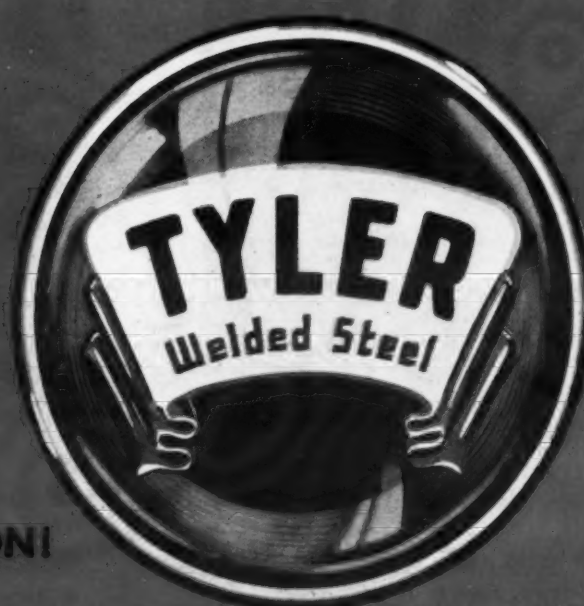
As a result of various engineering improvements Tyler developed the most flexible line of supermarket cases—to meet all requirements for efficient food store operation.

**1950****Refrigerated Tables**

Tyler dressed up that tried-and-true merchandiser, the "dump table" and introduced the first Refrigerated Display Table. Tyler design still years ahead!

**1951****Sectional Storage Freezers**

Tyler now introduces the first Sectional Storage Freezer which enables supermarkets, hotels, etc. to keep more frozen foods on hand, with many obvious benefits!



3 GREAT NAMES—TYLER, HARDER, WILSON!



# Refrigeration...

**the infant industry that became a giant...  
and helped to change our whole way of life!**



Many millions of Frigidaire household refrigerators in our nation's homes have helped immeasurably to raise America's health standards to new heights.



New standards of efficiency have been achieved in offices and plants where the magic of Frigidaire Air Conditioning fights hot-weather fatigue.



Employee morale and customer good will get a boost when there is a Frigidaire Water Cooler conveniently at hand to provide clean, cool drinking water.

Not so many years ago, when mechanical refrigeration was in its infancy, no one could possibly foresee all of its practical applications—the changes it was to make in man's way of living—its contributions to our nation's health, wealth, comfort, happiness and progress.

Today the effect of refrigeration on our lives is in evidence everywhere—in homes, schools, offices, factories—on farms, in land, sea and air transportation. In virtually every waking or sleeping moment, man is served by some product or by-product of the refrigeration industry!

The building of the refrigeration industry has not been a single-handed job. Nor is it the accomplishment of a few brilliant minds. Many people have had a hand in its success. The dealers and salesmen who worked tirelessly to convince the public of its vital importance; the engineers whose persistence brought constant new developments; the shop workers, home economists, researchers, service men and many, many others—all can be justly proud of their individual contributions toward making refrigeration the truly great industry it is today.

Frigidaire...one of the earliest pioneers...has been a dominant factor in this industry's growth, contributing many significant improvements in engineering, in product development, in distribution and sales. And Frigidaire, the leader, will always strive to further the refrigeration industry's aim—to bring a better way of life to more people.



The food industry depends on many Frigidaire products for storing and merchandising perishable foods.

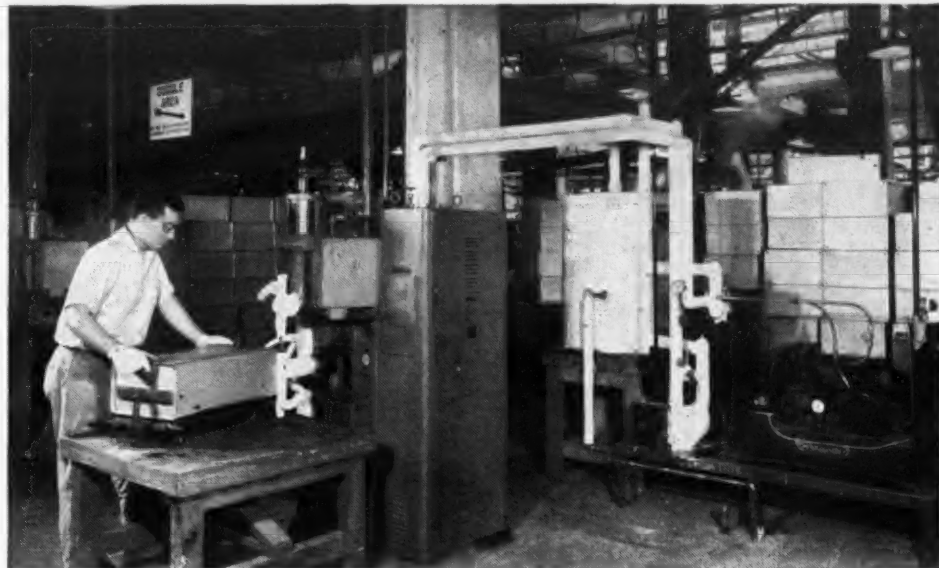


Many perishable foods now travel thousands of miles under Frigidaire refrigeration—and retain all their freshness, flavor and nutritive values.





Cold bottled beverages, dispensed from coolers refrigerated by Frigidaire, offer welcome refreshment at thousands of convenient locations.



Frigidaire refrigeration has helped industry develop new production techniques, cut waste and assure uniform quality.



Frigidaire air conditioning—clean and refreshing—provides added comfort and enjoyment to millions of rail and bus passengers.



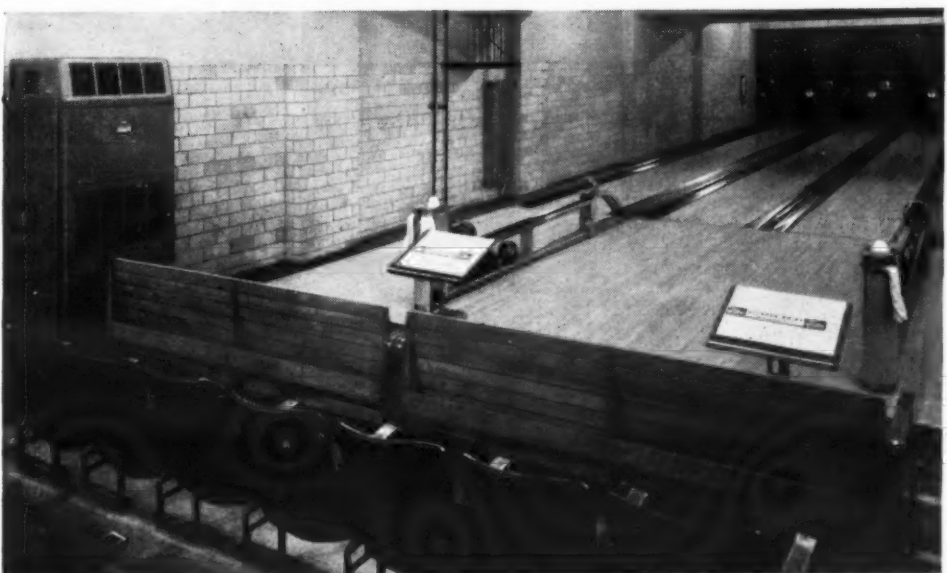
Storage rooms, kept moisture-free by Frigidaire Dehumidifiers, protect inventories worth many millions of dollars.



Menus of tempting variety emerge from Frigidaire Reach-In Refrigerators in hotels, restaurants, cafeterias and dining establishments of all kinds.



Frigidaire-made climates—from sub-Arctic cold to Death Valley dryness—permit precise laboratory research and product-testing techniques.



Frigidaire air conditioning and refrigeration heighten the enjoyment of sports and amusements—for spectators and participants alike.

# Frigidaire



**Appliances, Refrigeration and  
Air Conditioning**





"Another industrial 'giant' joined the industry when Westinghouse came in with plans calling for 25,000 the first year. It was an ambitious program then, but that same number represents just a good week's production by the industry today."

## Westinghouse Electric Refrigerator To Be Put On Market February 1st

MANSFIELD, Ohio—After years of study and preparation of the most thorough and painstaking character, the Westinghouse Co. will actively enter the electric refrigeration field on Feb. 1, 1930. On that date five distributors, long associated with the merchandising of Westinghouse products, will make simultaneous displays of the new Westinghouse electric refrigerators in their territories.

The line consists of complete, self-contained units in five sizes, ranging from 5½ cu. ft. to 17 cu. ft. Many novel features are incorporated in the design of both the refrigerating apparatus and the cabinets.

Plans call for the production of 25,000 units during the first year. All of these will be distributed east of the Mississippi river and north of the state of Virginia.

Three features have been selected for emphasis: (1) the buffet-top, (2) temperature selector, (3) broom high legs.

"And here a feature that's been taken for granted for many years is first introduced."

### HYDRATOR ON VIEW AS LEADING FEATURE OF 1930 FRIGIDAIRE

DAYTON — A moisture-laden vegetable storage compartment, in which vegetables remain crisp and fresh indefinitely, is the outstanding feature of household refrigeration now being displayed to the field organization of Frigidaire Corp.

This newest General Motors development in the refrigeration field is being presented to salesmen and the public as "the hydrator." The Frigidaire organization is of the opinion that it will prove of importance equal to its popular "cold control" in meeting the requirements of the housewife.

"When Clarence Vogt talked about 'quick-freezing,' he really meant 'quick.'"

### ICE CREAM FROZEN IN JUST 15 SECONDS

LOUISVILLE, Ky.—Ice cream can be frozen in 15 seconds, lard substitutes in 8, margarine in 10, eggs in 30, and orange juice also in 30 seconds by a process invented by Clarence W. Vogt here.

Vogt has designed special equipment for his method of quick freezing of food products, a development which is now commanding tremendous interest in the food industry. Under the trade names of Vogtators and Vogt Instant Freezers, his devices are being marketed by Vogt Processes, Inc. of Louisville.



"Development of a safety code that any municipality could adopt with the assurance that it had the complete support of the refrigeration industry was a noteworthy accomplishment of A.S.R.E."

## Standard Safety Code Wins Final Approval

A.S.A. Committee at Last Accepts Refrigeration Regulations Sponsored by A.S.R.E.

"No little credit for the growth of the industry in its early days belongs to utilities, who found the refrigerator a top producer of sales volume and power revenue."

## Electric Refrigerator Leads as Central Station Sales and Revenue Producer

A method of building an itemized budget for appliance advertising appears in Nov., 1929, issue of N.E.L.A. Bulletin, issued by the National Electric Light Association, New York City.

### RANK OF TWENTY ELECTRIC APPLIANCES

Rank*	Annual Sales Volume	Annual Load Revenue	Annual Combined Income**
1	Refrigerators	Irons	Refrigerators
2	Cleaners	Ranges	Cleaners
3	Irons	Kitchen Units	Ranges
4	Washers	Refrigerators	Washers
5	Ranges	Toasters	Toasters
6	Toasters	Cleaners	Kitchen Units
7	Irons	Desk Fans	

\*Based on dollar value of appliances sold in 1927.

\*\*Sales plus load revenue

"You can chalk this one up to the credit of Republicans. This was done after a fire badly damaged the White House office."

## WHITE HOUSE OFFICE SOON WILL HAVE NEW AIR COOLING SYSTEM

"Soldered joints in refrigeration are accepted as standard practice, but someone had to pioneer them."

### MUELLER ENGINEERS TEACH PLUMBERS NEW TRICKS

All of the argument in Chicago about "leaky" refrigeration systems set the Mueller Brass Co. people thinking. Perhaps brass parts could be put together a different way. Why not solder the joints? Nothing new in that suggestion. That had been tried a thousand times before. A soldered joint lacked strength. It only sealed the edges of the fitting.



Then somebody thought about capillary attraction. Why not make a fitting with a smooth bore just large enough to slide over a piece of pipe and with just enough clearance to let old man Capillary do his stuff? Make a little hole for the solder to go in, let capillary attraction pull it the full length of the joint. They tried it and it worked. Patent papers were filed.



"Practical possibilities in heating by refrigeration were foreseen two decades ago, but they didn't call it the 'heat pump' then."

## PROMOTING A PARADOX

### Heating by Refrigeration

By Carl F. Mowrey, Syracuse Lighting Co., Inc.

It is well known in engineering circles that the heat dissipated by the condenser of a refrigerating system is greatly in excess of the heat equivalent of the electric current consumed by the motor. It follows consequently, that the practicability of heating buildings by the use of refrigerating machines has been frequently discussed, but up to the present time there is nothing on the market for this purpose.

It is the purpose of this paper to show that the time of heating by the refrigeration cycle is steadily approaching and that it is apparently worth while for those who would benefit the most to take an active interest in the development of a system for practical use.



"The 'independents' helped develop the industry into its present size, and it was their need for repair parts and equipment which largely brought about the birth of the independent parts wholesaler."

## CALIFORNIA COMPANY PLAYS NO FAVORITES IN SELLING SERVICE

LOS ANGELES—An independent service organization which stands ready and willing to service all sorts and conditions of refrigerators at almost any hour of the day or night, is flourishing here. Refrigeration Service, Inc. began its career on Aug. 25, 1928, with, as L. P. Roth, of the executives puts it, "four employees, a few service parts, and an abundance of faith in the future."

That abundance of faith seems to have been justified because the corporation now has a staff of 17, consisting of eight servicemen, five shop men, one stockroom man and three office employees. Its activities also have been extended to the carrying of refrigeration supplies, a branch of the business that is continually increasing.

"Here were revealed the first details of a new type refrigerant which eventually (in the form of various compounds) dominated the household, commercial, and air conditioning fields. The new 'family' didn't even have a name at this time. What would you have chosen?"

## MIDGLEY DESCRIBES NON TOXIC QUALITIES OF NEW REFRIGERANT

ATLANTA, Ga.—Properties of a new refrigerant as yet unnamed, said to be ideally suited for mine cooling, room cooling, cold storage warehouse and other extensive refrigeration projects were demonstrated April 8 by its discoverer, Thomas Midgley, Jr., at the meeting of the American Chemical Society.

The new refrigerant, which is non-toxic, non-inflammable, and non-explosive is particularly suited for use on submarines and in other places where there is but limited ventilation, he stated. Owing to its favorable engineering properties it opens a still broader field for heavy duty commercial refrigeration.

# REFRIGERATED FOOD

## SECTION OF ELECTRIC REFRIGERATION NEWS

"Recognizing the great potential market in the frozen food industry, the NEWS went to bat for the pioneers of quick freezing by inaugurating a special section (above) devoted exclusively to reporting the developments in all phases of this field. . . . In a front-page editorial the NEWS foresaw the tremendous expansion ahead for frozen foods and put its finger on the bottleneck—distribution. . . . Birdseye's definition of quick freezing in 1930 still holds true. . . . The first experiment in merchandising frozen foods was no mere 'flash in the pan' as later developments proved. . . . much to the consternation of some butchers who made things tough for the new idea in some communities. . . . Designing and producing cases to permit adequate display and yet maintain low enough storage temperatures had engineers scratching their heads in those days."



## The Future of Quick Freezing

With increasing frequency in the last few months the NEWS has had occasion to mention, both in its news columns and editorially, the quick freezing of food. An interest in this subject is spreading throughout the country, not only among refrigeration men, but among those who are identified directly with the production and distribution of food.



Quick freezing is no mere refrigeration process evolved by refrigeration engineers. It is a new means for the distribution, preservation and safeguarding of food, and as such is of vital interest to every man, woman and child in the land.

What of the problem of distribution? The great meat packers are seriously considering quick freezing; but it is the distribution problem that baffles them. The producers of fish on the Atlantic seaboard have been among the pioneers in the new development, but they too are doubtful about readjusting the country's channels of distribution. It can't be done overnight, and it certainly can't be done without the cooperation of the refrigeration industry which will be called upon to manufacture and install the equipment which inevitably will be needed.

## PIONEER—Clarence Birdseye Tells of Problems Which Confront New Industry

By Clarence Birdseye

Interest in the preparation and distribution of quick-frozen packaged perishable foods has become widespread during the past year. Perhaps the following account of some of our experiences may prove of value in working out the large number of problems which yet remain to be solved before this new industry may be established on a firm commercial basis. There is nothing mysterious about this business, but there are a number of basic considerations which must constantly be borne in mind by those who are responsible for developing and placing on the market additional quick-frozen products.

It is essential that we have a definition of the term quick freezing, and since as far as my experience goes, there is no substitute for microscopical crystals, I venture to define quick freezing as freezing in sufficiently short time so that crystals which are formed within the tissues of the product are so microscopical that they cause no appreciable damage. A quick frozen flesh product when thawed must so nearly resemble the product before it was frozen that the most critical practical observer shall be unable to notice any difference in its appearance and flavor.

## QUICK FROZEN FOODS SUBJECTED TO TEST OF PUBLIC OPINION

SPRINGFIELD, Mass.—Here in the heart of conservative New England the first extensive test of the popular appeal of quick frozen foods is under way.

Handled in specially constructed refrigerated display cases, the frozen products, prepared by the Birdseye process, and merchandised by the General Foods Corp., sold from the first hour at a rate that surprised even General Foods officials.

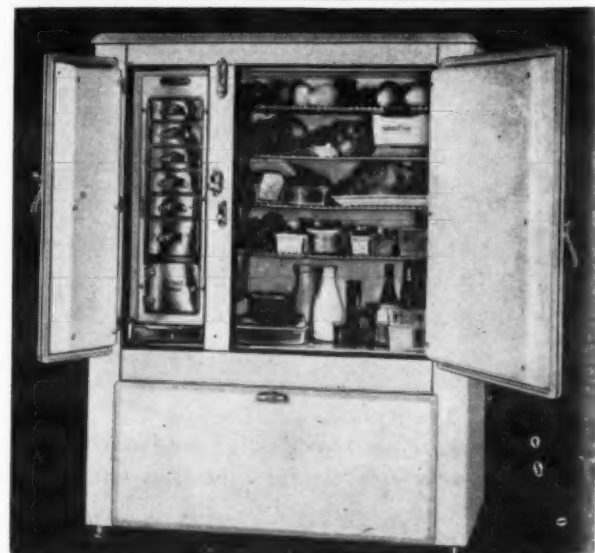
## BUTCHERS

Deal Harsh Blow to Quick Frozen Products in Minneapolis

MINNEAPOLIS, Minn.—An ordinance adopted recently by the City Council at the suggestion of the Meat Dealers' Retail Association seems to have placed Minneapolis in a rather unenviable position so far as the adoption of the more modern methods of selling packaged meat products is concerned. Under the provisions of the ordinance, meat cannot be sold except in stores equipped with walk-in coolers.

## Standardized Production Next Big Step In Making Cases for Quick-Frozen Food

Engineers at Detroit A.S.R.E. Meeting Outline Specifications Which Industry Must Meet In New Era



This 1930 Kelvinator was equipped with a separate section (at left) containing ice trays and a "Frost Chest" at bottom for low-temperature food preservation. Although unlike modern design, it was something of a two-compartment, two-temperature refrigerator.



# CLEANABLE

## YOUR NO. 1 DEMAND

when buying  
condensers



WATER-COOLED, DOUBLE TUBE, COUNTER-FLOW

All with seamless copper tubes, brass headers machined and brazed. Water tubes are accessible from either end.

## NOW COST NO MORE THAN ORDINARY CONDENSERS DUE TO HALSTEAD & MITCHELL'S TREMENDOUS HIGH PRODUCING CAPACITY

Regardless of whose condensing unit you buy—and regardless of its size—your first "must" is to insist that it have a CLEANABLE (water-cooled) condenser to help you maintain new-unit efficiency indefinitely. It costs no more originally, and the added advantages in longer life and more efficient service can't be overlooked. No matter how poor the water conditions, and no

matter how long the service of the unit, you can always count on restoring new-unit efficiency. When you realize that use of a simple spiral tool, doing a thorough mechanical cleaning job, can always restore copper-water surfaces to their original heat-exchange efficiencies, you won't settle for anything less than a cleanable condenser. And especially so now since most major manufacturers recognize the demand for "Cleanable", and are equipping their units accordingly in all sizes. Capacity range one-third through twenty-five ton.



### 20-Year Guarantee!

on the WETTED DECK SURFACE

IN THESE NEW  
*Halstead & Mitchell* COOLING TOWERS

Be sure to see these "Built-Like-A-Battleship" Cooling Towers. Really economical and lastworthy, with Halstead & Mitchell processed wetted deck surface chemically treated with special Koppers wood. Easily cleaned, accessible thru inlet side of tower.  
Capacities: 5, 7½, 10, 15, 20 thru 50 tons.

**HM**  
*Halstead & Mitchell*

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

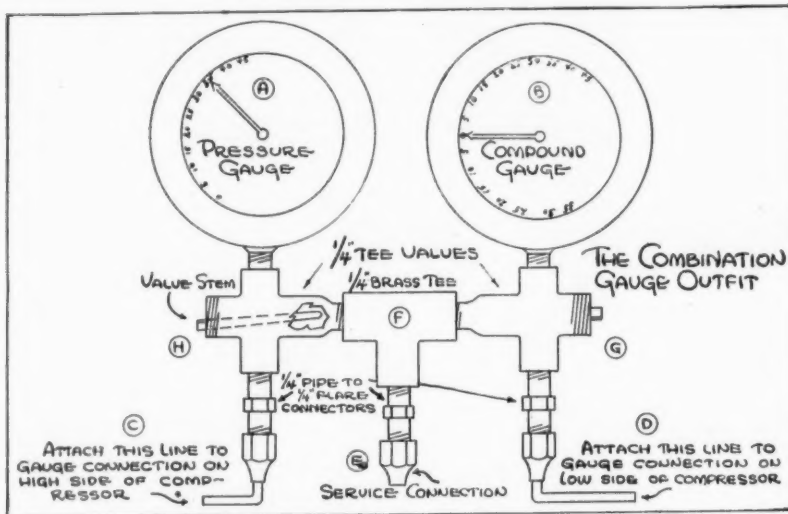
AT LEADING WHOLESALERS EVERYWHERE—OR SEND FOR DESCRIPTIVE LITERATURE & PRICES





"In one of the first articles Ken Newcum wrote for the NEWS on servicing household refrigerators he depicted (below) a combination pressure and compound gauge for servicemen. It proved to be a very handy tool for them and gained widespread use throughout the industry."

### Combination Gauge Outfit



## 1930



"Service information was mostly acquired the hard way until helpful suggestions like these started piercing the 'iron curtain' of carefully guarded service secrets."

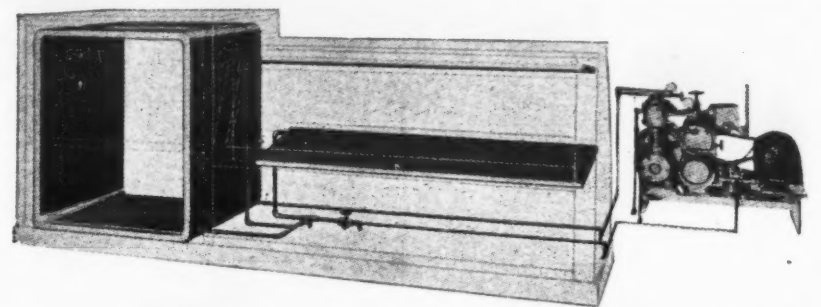
### Servicing the Refrigerator

#### COMBINATION GAUGES FOR DIAGNOSING THE SYSTEM

By K. M. Newcum

The first thing to do when servicing a refrigerating machine is to install both the compound gauge and the pressure gauge. This enables the serviceman to properly diagnose any condition that might exist inside the system.

Many servicemen, after having serviced machines for some time have the feeling that it is no longer necessary for them to use both gauges or any at times, for the simple reason that they are too much trouble to put on and take off.



### NOVELTY

Of Design Marks DoleCo Case

CHICAGO—Recognizing the fact that expert opinion in regard to the handling of quick-frozen products is swinging around to a demand for lower temperatures, the Dole Refrigerating Machine Co. of this city has brought out a new type of case which maintains temperatures from 0 to 5° F. in the display section, and from 0 to -5° F. in the storage compartments.

The DoleCo cold plate system is used in this new type of case. Two plates one above and the other below the foods in the display section

furnish the refrigeration. The storage compartment is completely surrounded by DoleCo cold plates, the food in storage being refrigerated from four sides. Air circulation is eliminated or at least reduced to a minimum.

### MILESTONES

FOR INDUSTRY PEOPLE,  
COMPANIES, TRENDS

### LONG STRUGGLE ENDS AS CHICAGO ADOPTS REFRIGERATION CODE

DAYTON COMPANY TAKES  
OVER FLEXOTRAY RIGHTS

LEONARD WILL MARKET  
ELECTRIC REFRIGERATOR

Mills Enters Field

CARRIER COMPANIES JOIN  
IN REFRIGERATION MERGER

PORTABLE COOLER  
PERMITS QUICK SERVICE  
TO MOTORING TRADE

Enter Philco, Zenith

STREAMLINE FITTING  
DEVELOPED FOR  
COPPER TUBING

Grigsby-Grunow to  
Make Refrigerators

PEERLESS LOOKS AHEAD  
TO AIR COOLING FIELD

Penn Electric To Make  
Temperature Selector

NEW WELSBACH UNIT  
HAS SEPARATE COIL  
FOR FREEZING CUBES

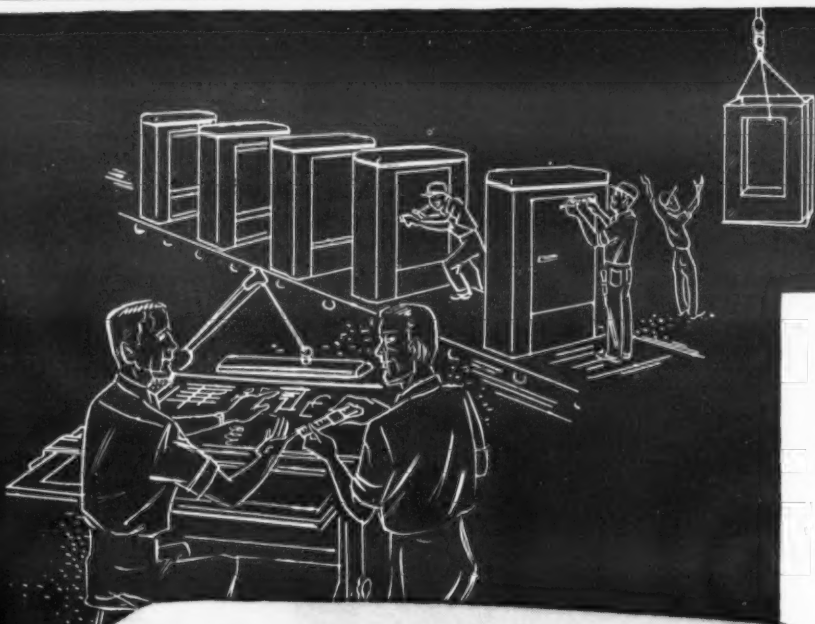
MONTGOMERY WARD SEEKS  
SUITABLE DOMESTIC UNIT

Servicemen Are Planning  
National Association

ROSTER OF MANUFACTURERS  
OF FROZEN FOOD CASES

The manufacturers listed below are making display and storage cases which, they announced, are suitable for the handling of quick-frozen foods. Descriptions of the various cases have been printed in previous issues of the Refrigerated Food Section.

American Foundry Equipment Co.  
Blazek & Co.  
Commercial Refrigerator Mfg. Co.  
Downing Mfg. Co.  
H. Ehrlich & Sons Mfg. Co.  
Electro-Kold Corp.  
Elkins Refrigerator & Fixture Co.  
Federal Refrigerator Co.  
Ford Refrigerator Co.  
Frigidaire Corp.  
General Electric Co.  
Gibson Refrigerator Co.  
C. V. Hill & Co.  
Husmann Refrigerator Co.  
Koch Butchers Supply Co.  
Ligonier Refrigerator Co.  
Marsden Store Fixture Co.  
McCray Refrigerator Co.  
Northey Mfg. Co.  
Nu Way Fixture Co.  
Ottenheimer Bros.  
C. L. Percival Co.  
Serval, Inc.  
Smoot-Holman Co.  
Warren Co.  
Weber Showcase & Fixture Co.



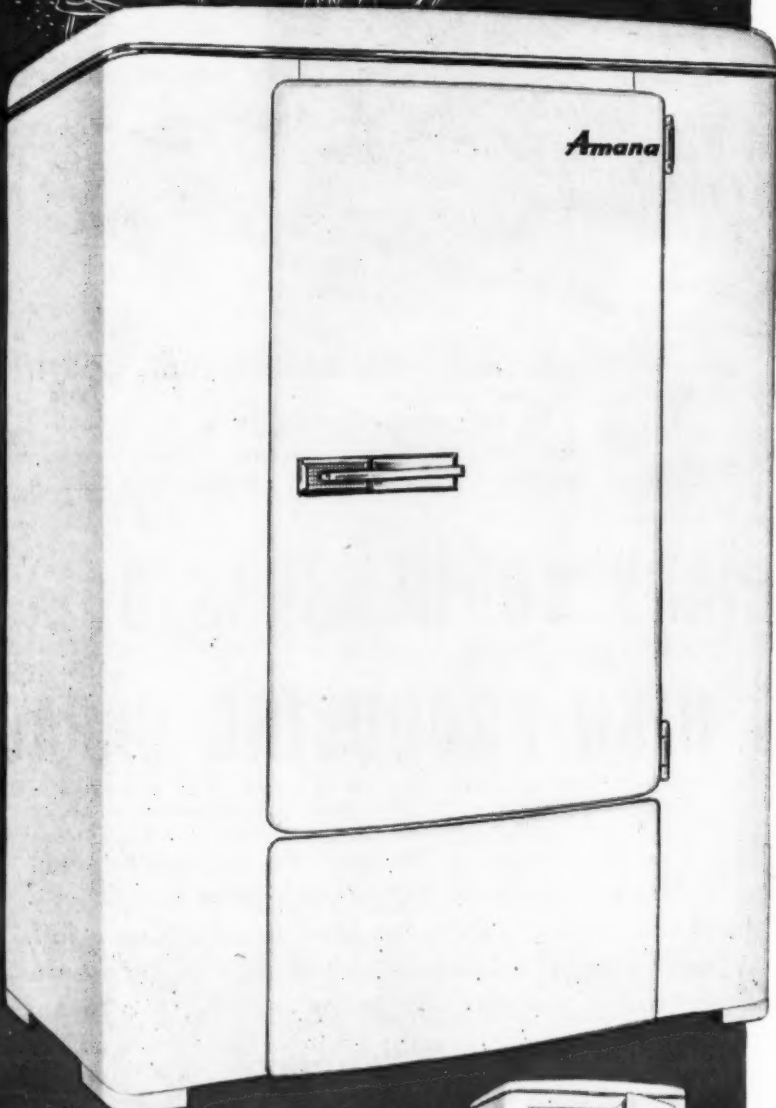
For the Years Ahead...

## Amana

### FOOD FREEZERS

In order to develop the correct perspective for the years ahead, it's a sound practice to pause occasionally for a review of the past. Perhaps this explains why right now, the makers of Amana Food Freezers face the future so optimistically. For, at Amana, where Amana freezers are built, the past is represented by a century-old tradition of fine craftsmanship. Skills, handed down from generation to generation are inherent in every Amana freezer.

The years ahead hold tremendous promise, too, for the dealer who sells Amana Food Freezers; profitable years . . . pleasant years. Profitable because the Amana line, offering the dealer the highest dollar profit per sale in the industry is made to highest quality standards in a wide range of sizes and models satisfying the needs of every prospect. Pleasant years, due to Amana's complete and thorough cooperation with every dealer . . . cooperation that goes all the way down the line, including a liberal service policy, generous advertising allowances, plus outstanding promotional and merchandising aids that assure steady sales, every week . . . every season . . . for the years ahead.



**Amana MODEL 18**  
**UPRIGHT FOOD FREEZER**  
Years ahead in features and design. 18 cu. ft. capacity. "Fits Any Kitchen"

**Amana MODEL 12**  
**UPRIGHT FOOD FREEZER**  
Holds approximately 420 lbs. of food. 12 cu. ft. capacity



Write for proof that Amana dealers' average profit per sale is the highest in the industry.  
AMANA REFRIGERATION, INC. AMANA 19, IOWA

## Amana

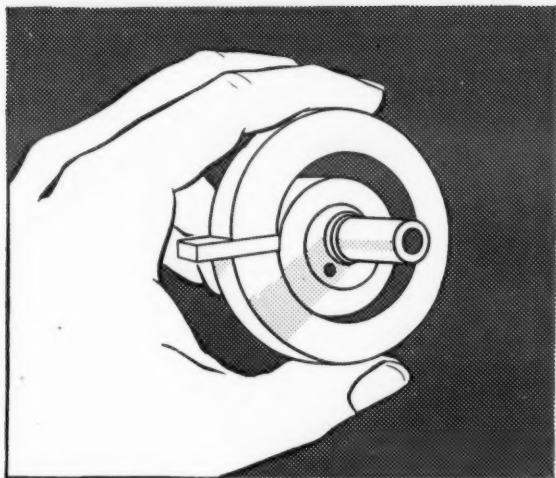
"BACKED BY A  
CENTURY-OLD TRADITION OF  
FINE CRAFTSMANSHIP"



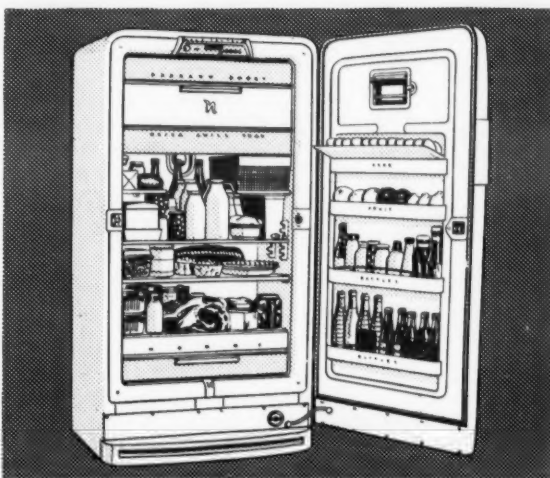
CONGRATULATIONS, AIR CONDITIONING AND REFRIGERATION *News* 1926  
1951

For 25 years

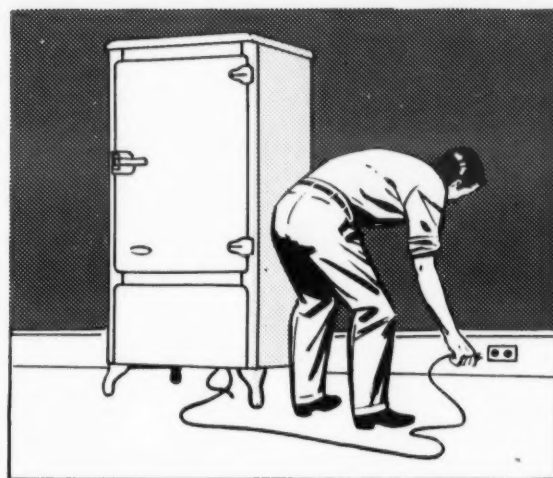
**NORGE** too, has pioneered  
with new ideas...new developments!



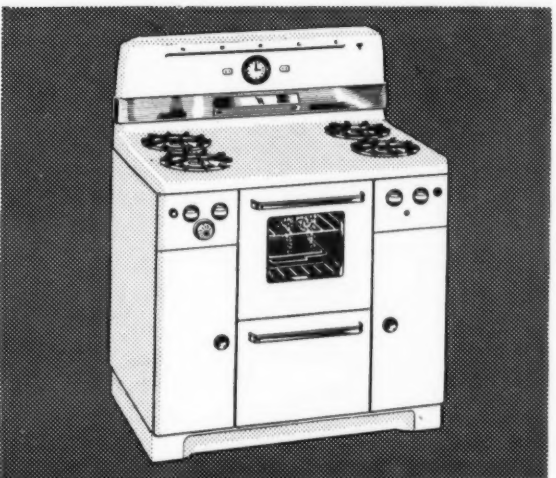
**FIRST** with Rollator—simplest compressor ever built. Just three moving parts. Small in size—long in life. Completely revolutionized the refrigerator industry.



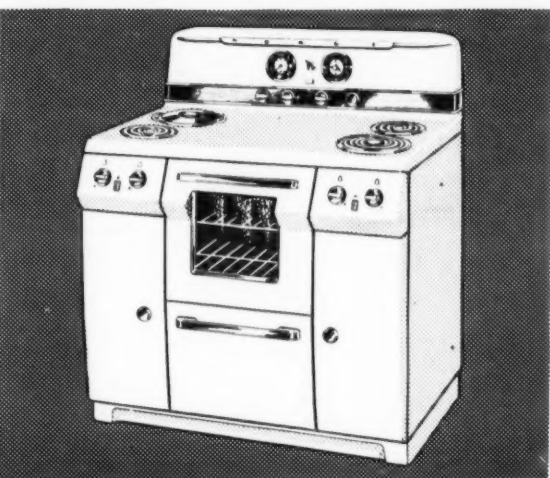
**FIRST** with Jet Self-Defrosting—so fast, so efficient it automatically whisks away frost every night—in minutes! Ice cubes and ice cream remain solidly frozen.



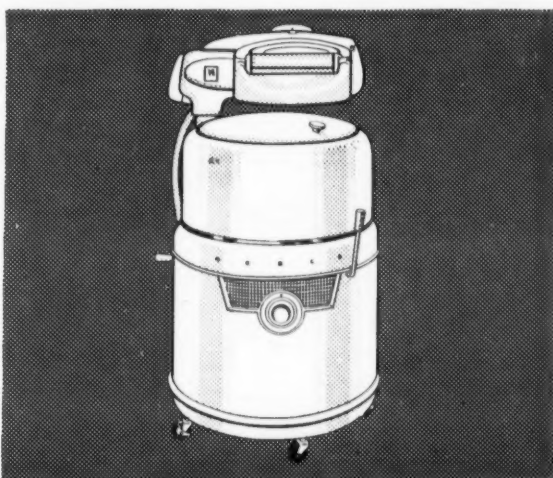
**FIRST** with completely self-contained plug-in type refrigerator. So simple, refrigerator could be moved from factory to store to home and plugged in.



**FIRST** with complete electric ignition on gas ranges • Balanced Heat oven • SpirO-lator burners • fully automatic gas ranges • complete titanium porcelain exterior



**FIRST** with 7-Speed Tele-Switch controls to enable user to dial the exact heat needed • Blended-Heat oven • 4-way automatic electric ranges • Minute Minder on electric ranges



**FIRST** with special "pyramid" construction and 5 casters (2 self-locking) to provide greater stability • all white porcelain tub • linkage type gear transmission

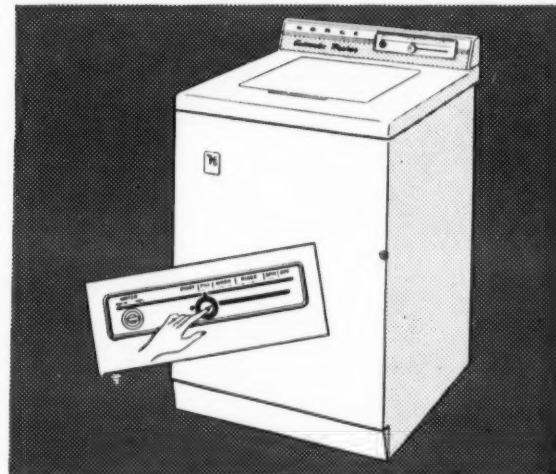


**NORGE RESEARCH CONTINUES IN FULL SWING...**

Every minute of the day! Busily looking for the new—and finding it! Experimenting, improvising, testing—with one objective in mind: Build a better product!

That's how homemakers throughout the country have benefited through

this long and vast research program. And thanks to the tremendous resources and laboratory facilities of Borg-Warner, Norge dealers will continue for the years to come to offer the newest, finest, and most advanced appliances on the market!



**FIRST** with Time-Line—simplest automatic washer control ever designed. Not even a dial to set! User may skip or repeat any phase of the wash cycle because every step is visible all the time.

In future issues of *REFRIGERATION News*

**WATCH NORGE** make the news!



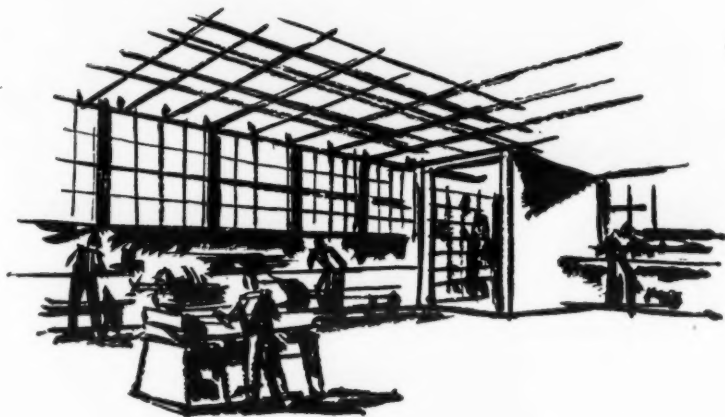
# ...and we've just kept growing!



Hello, there. I'm "Vern" Nelson... I've been with Superior for all of its 13 years, and I'd like to tell you a little about how this company of ours grew from a small warehouse to one of the outstanding companies in the refrigeration industry today. It's a success story on which we pride ourselves.



First off, Jack Forbes—one of the best known and respected men in the industry—struck out on his own in 1938. And most folks thought that the field was overcrowded at the time! But Mr. Forbes was a natural in the field—was named second president of REMA.



At first, about all we did was assemble parts for diaphragm packless valves and process a few fittings and accessories. There were no manufacturing facilities in the plant at all. In fact, there were just 12 employees back then, but from the outset, there was an air of success about the company.



With added room and more resources available, we decided to branch out a little—into the Liquefied Petroleum field. This allied industry has always felt the need for added safety precautions, especially in the high-pressure field. It wasn't long before the Superior name was synonymous with safety in the LP industry.



By this time, the war was bearing down on all industry—better products at a faster rate. We met that test easily. Part of the secret of this wartime success was that we had expanded, enlarged and pioneered in so many new products and devices prior to the war, that defense production meshed easily with our peacetime facilities.



And that's a mighty pertinent fact. Good management like that just doesn't happen. Here at Superior, we've always had a young, aggressive group of executives with many years of experience in this field. Though the company is young in years, there are decades of experience and product know-how behind every valve and fitting that bears our name.



And here's concrete proof of what I've been telling you. Sales and profits. This shows you how the sales volume has expanded. See how Superior has paced the industry the last few years! Good management, good products and selective customers have built this multi-million dollar business for our 13-year-old company.

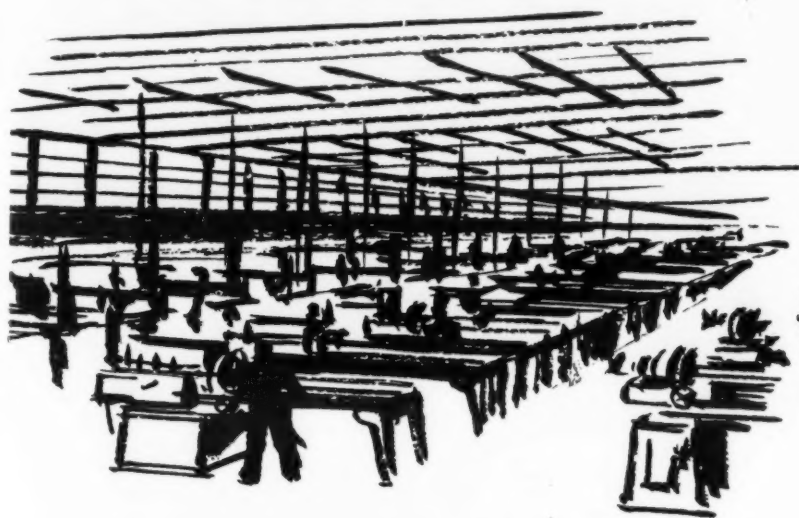


Here's part of the reason for this rapid growth—our host of trained men and women who work in our plant. There are 140 of us now in the Superior family. It's gratifying for me to look around and count so many faces especially when I think of the handful that we started with. And there are 27 of us here that are now in our tenth year with the company.

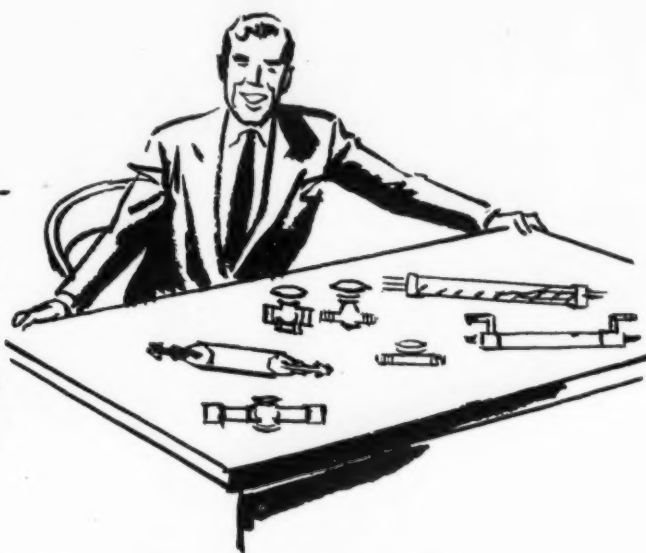


Well, that's about all from "Vern" Nelson. Hope you understand a little better how this small company squeezed into a crowded industry just 13 years ago and already is being referred to as a leader in the field. We like to think of our success as a vote of confidence from you—our customers—confidence in our long years of experience in the industry—and confidence in our young company. That's our trademark above—it's your symbol of satisfaction when you want the very best in refrigeration products.

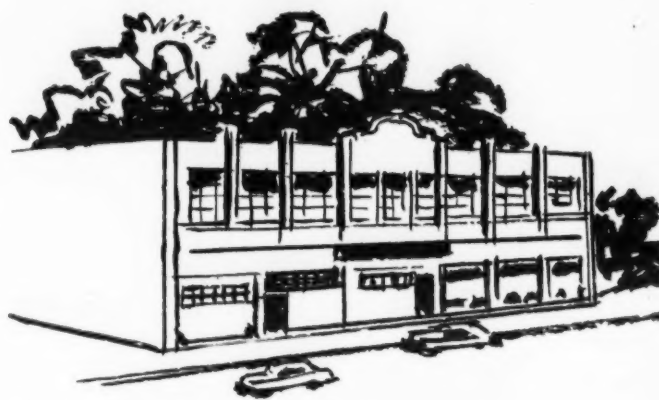




By the early 40's things started to hum. We needed new equipment to machine the new products that we introduced into the Superior line. Things like manifolds, check valves, gauge sets, high pressure cylinder valves, etc. started to roll off the production line. And our salesmen in the field were prodding us to expand even further.



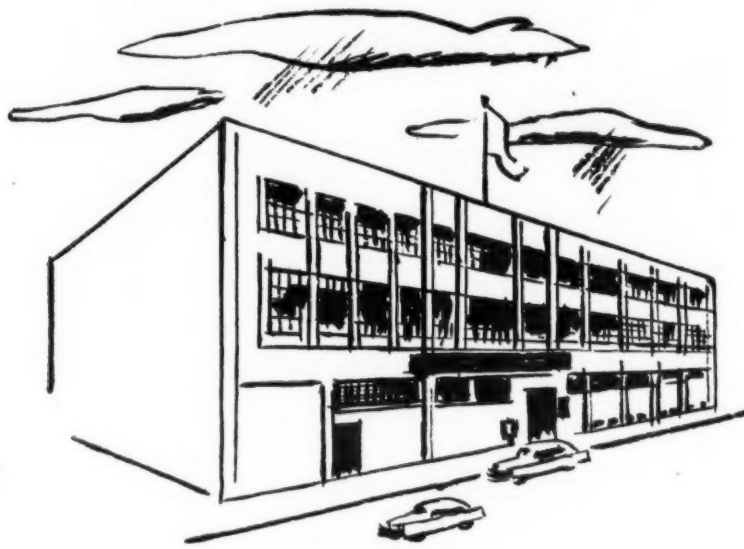
And that's what we did. I guess our first big jump came right before the war. That's when we added driers, heat exchangers, sight glasses and a new-type globe valve. As always, quality was the selling feature of Superior products. All our servicemen said, "They serve better—last longer."



By this time the old warehouse was much too small. So we took the big step—bought our own plant and set up offices on West Liberty Avenue in Pittsburgh. I guess most companies have experienced periods of rapid growth where added expansion is needed—it was a great step for our company of just 3 years.



We like to claim a lot of credit for the phenomenal success of Superior right here in the home office. But it's the boys on the road—the salesmen who call on you—who have built our good reputation from coast to coast. Yes, Neil, Irv, Kurt, Chick, Austin, Bob, Jack, Bill—all are part of the "experience, plus" pattern on which we pride ourselves.



All of this helped to skyrocket the sales graph which I'll show you later. But back to my story for a few minutes. Right after the war, we felt another space pinch in the plant, and finally rebuilt our plant and added a complete floor—enlarging our facilities by 35%. By now our total floor space is up to more than 25,000 square feet.



We like to give a lot of credit to our engineering department for keeping Superior products "best sellers" for the sales force. Their continued research and testing guarantees you the finest in valves and fittings. This "Perfect Engineering" that we've talked about in some of our ads, is your assurance of quality at Superior.

**Remember—Your local wholesaler is your best source of supply for Superior products**

# Superior

## valve and fittings co.

**1509 West Liberty Avenue      Pittsburgh 26, Pa.**

**13 years of progress—and we've just begun to grow!**



"In 1931 the NEWS published this chart as a guide to prospects for commercial refrigeration equipment. While some additions could probably be made, it will still hold up pretty well for the dealer or contractor who wants to know the scope of his possible market."

Wide Variety of Applications for Cooling Equipment

PROSPECTS	REQUIREMENTS											
	REFRIGERATION	WATER COOLERS	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES	WATER COOLERS & CASES
AMUSEMENT PARLORS	x	x	x	x	x	x	x	x	x	x	x	x
BAKERIES	x	x	x	x	x	x	x	x	x	x	x	x
BANKS	x	x	x	x	x	x	x	x	x	x	x	x
BARBER SHOPS	x	x	x	x	x	x	x	x	x	x	x	x
BOATS	x	x	x	x	x	x	x	x	x	x	x	x
CHURCHES	x	x	x	x	x	x	x	x	x	x	x	x
CLINICS	x	x	x	x	x	x	x	x	x	x	x	x
CLUBS	x	x	x	x	x	x	x	x	x	x	x	x
CREAMERIES	x	x	x	x	x	x	x	x	x	x	x	x
DAIRIES	x	x	x	x	x	x	x	x	x	x	x	x
DRUG STORES	x	x	x	x	x	x	x	x	x	x	x	x
EXPERIMENTAL LABS.	x	x	x	x	x	x	x	x	x	x	x	x
FACTORIES	x	x	x	x	x	x	x	x	x	x	x	x
FIRE STATIONS	x	x	x	x	x	x	x	x	x	x	x	x
FLORISTS	x	x	x	x	x	x	x	x	x	x	x	x
FRUIT DEALERS	x	x	x	x	x	x	x	x	x	x	x	x
FURRIERS	x	x	x	x	x	x	x	x	x	x	x	x
GARAGES	x	x	x	x	x	x	x	x	x	x	x	x
GASOLINE STATIONS	x	x	x	x	x	x	x	x	x	x	x	x
GROCERY STORES	x	x	x	x	x	x	x	x	x	x	x	x
HOSPITALS	x	x	x	x	x	x	x	x	x	x	x	x
HOTELS	x	x	x	x	x	x	x	x	x	x	x	x
INSTITUTIONS—CITY & STATE	x	x	x	x	x	x	x	x	x	x	x	x
LAUNDRIES	x	x	x	x	x	x	x	x	x	x	x	x
LIBRARIES	x	x	x	x	x	x	x	x	x	x	x	x
MARKETS	x	x	x	x	x	x	x	x	x	x	x	x
MEAT MARKETS	x	x	x	x	x	x	x	x	x	x	x	x
NURSERIES	x	x	x	x	x	x	x	x	x	x	x	x
OFFICE BUILDINGS	x	x	x	x	x	x	x	x	x	x	x	x
PHOTO DEVELOPERS	x	x	x	x	x	x	x	x	x	x	x	x
PUBLIC BUILDINGS	x	x	x	x	x	x	x	x	x	x	x	x
RESIDENCES	x	x	x	x	x	x	x	x	x	x	x	x
RESTAURANTS	x	x	x	x	x	x	x	x	x	x	x	x
SCHOOLS	x	x	x	x	x	x	x	x	x	x	x	x
STORES	x	x	x	x	x	x	x	x	x	x	x	x
THEATRES	x	x	x	x	x	x	x	x	x	x	x	x
WAITING ROOMS—STATIONS	x	x	x	x	x	x	x	x	x	x	x	x
WAREHOUSES	x	x	x	x	x	x	x	x	x	x	x	x
APARTMENTS & SEMI-HOTELS	x	x	x	x	x	x	x	x	x	x	x	x

"The timing of this prediction was not far off."

Electricity Will Be Chief Servant In Home of 1941—Prophesies Speaker

By Loring A. Schuler, Editor, Ladies Home Journal

This house of the future will have other features to make it more comfortable to live in. It will be insulated against heat and cold; it will be built to shut out unwanted noises of the street . . . Many of its furnishings will be built in, as an integral part of the house itself, and they will be built for both beauty and comfort.

The kitchen will be a self-contained unit of efficiency—small, compact, planned to save steps and time and labor, with all sorts of modern devices incorporated in their proper places. It is only within recent years that women have begun to demand of architects that their workshops be planned for factory efficiency.

There will be in this house of tomorrow more opportunities for recreation than most of us enjoy at present. The dusty basement will then be a clean playroom for both old and young of the family. Radio and television will be as common as telephones and running water.

SANITARY TO MAKE ELECTRIC MACHINE

FOND DU LAC, Wis.—The Sanitary Mfg. Co. for many years a manufacturer of refrigerator cabinets, has started production of a five-cu. ft. electric refrigerator.

"To city officials who were wondering just what this new-fangled business was leading to, the offer to witness tests on refrigerants must have been welcome."

DuPont Laboratory Demonstrates Refrigerants

WILMINGTON, Dela.—Refrigeration engineers and municipal officials interested in codes and ordinances relating to the installation of refrigeration equipment witnessed a series of comparative tests of refrigerants at the Jackson Laboratory, Deepwater Point, N. J., on Oct. 28 and 29. These tests were arranged for by Kinetic Chemicals, Inc., and were made under the supervision of Wm. S. Calcott, director of Jackson Laboratory.

The gases tested included sulphur dioxide, dichloro-difluoromethane (Kinetic No. 12), methyl chloride, dichloromethane (methylene chloride), carbon tetrachloride, carbon dioxide, ammonia, propane, and isobutane.

COPELAND'S BIGGEST

E. A. Terhune, Boston Copeland distributor, now handles biggest sales volume.

"Ours Makes 96 Ice Cubes"



Refrigerators, especially larger ones, were still enough of a novelty to inspire this cartoon from the New Yorker which was reprinted in the NEWS.

"The 'world's largest department store' surveyed the ground pretty carefully before it took on refrigeration, judging by the letter, which also pointed up the need for accurate statistical information."

R. H. Macy Store In the Market

R. H. MACY & CO., Inc.  
34th St. and Broadway,  
New York, N. Y.

April 2, 1931

ELECTRIC REFRIGERATION

NEWS,  
Detroit, Mich.

Gentlemen:

Will you please let us know where we can obtain an impartial expression or viewpoint on the various electric refrigerators manufactured in the country today. We are at present, and have been for several months, testing various electric refrigerators. To supplement our tests we would like to get in contact with some authority on electric refrigeration.

At present, we handle no electric refrigerator. As soon as we have satisfied ourselves as to the quality of the refrigerator we will put one in. If you can help us, we would appreciate it very much.

Very truly yours,  
L. D. JALKUT,  
Department 116

"Standards for determining the size of household refrigerators were recognized as an important requirement of the industry."

N.E.M.A. DIVISION DRAFTS METHOD OF RATING UNITS

CLEVELAND—Proposed methods for specifying cubical content and shelf area of refrigerators, and a tentative method of testing domestic equipment were reported on in the March 25 meeting of the Refrigerating Division of the National Electrical Manufacturers' Association. Louis Ruthenburg, division chairman, presided.

"The refrigeration industry has helped humanity in more ways than one."

CATES DOES A BIT OF POLICE WORK

NEW YORK CITY—The Independent Refrigeration Service of New York City, a young up-and-coming organization, under the leadership of Howard N. Cates and James L. Campbell, reports the following incident:

Mr. Cates, while inspecting a soda fountain job which had just been installed by his men, was forced to go through a poolroom, which was located in the basement underneath the store where the job had been installed.

Just as he settled down to work, a fight started between two habitués of the place, which threatened to result in the destruction of several of the owners chairs, glasses, cues and so forth. Mr. Cates, who was in the same corner in which the men were fighting, determined to do his bit, and released sufficient quantity of SO<sub>2</sub> to bring the young bucks to reason. The proprietor was so grateful that Mr. Cates was able to get an order for all repair work to be done on the premises.

"Attacks against the enterprising and intelligent specialty salesman (remember?) brought forth a spirited defense which stressed the importance of the honest door-bell pusher in bringing the benefits of modern science into the home within the shortest possible time."

T. K. QUINN ANSWERS CRITIC OF MODERN SPECIALTY SELLING

Scores Intolerant Attitude of College Professor

By T. K. Quinn, General Electric Co.

I have just seen an article by Prof. Lawrence H. Conrad of the State Teachers College at Mont-Claire, N. J., with the derisive title "Porch Climbers." The article first appeared in the April, 1931, issue of Forum, and was subsequently republished elsewhere. It is an unsympathetic and, I believe, intolerant statement of the case against aggressive salesmen of household devices who go direct to the homes of the country to effect their sales. The article makes no distinction among the men or the products or the principles they represent.



Self-service was coming into its own in some of the larger, more progressive stores. Cases being open seemed to be a major problem as is indicated by the foot pedals to control the opening of the lids on the Warren cases.

"Independent service companies had a hard struggle to achieve recognition, but help did come from some directions."

INDEPENDENT SERVICE COMPANIES HANDLE BULK OF SERVEL'S WORK

By C. L. Olin, Service Manager, Servel Sales, Inc.

As far as we know, Servel Sales was the first company to recognize the advantage of service company operations. Early in 1928, because of developments that were apparent in the field, we recognized the fact that the inevitable trend in the industry was toward the service company operation and we contended that eventually the service company would take the same place in our industry that the garage does in the automobile industry.



The first Servel service company of record was started in Oakland, Calif. by W. E. Magoon, formerly employed as a Servel service man in the Oakland branch. He received sufficient encouragement from local ice cream manufacturers to start a business of his own and his first work was handling service and installation for these ice cream companies on a flat rate basis.

"Business (increases) as usual."

DAYTON RESTAURANT USES 11 COOLERS

DAYTON—Installation of 11 Frigidaire room coolers in the Seville Tavern, popular Dayton restaurant, has led to a 30% increase in business in the first two weeks the coolers have been in operation, according to M. J. Comisar, president of the company operating the restaurant.

"Air conditioning was far enough advanced in 1931 that the account of its development by the man who made it possible provided interesting reading."

CARRIER TRACES HISTORY OF AIR CONDITIONING

Conditioned Air First Sought In 1902 by Brooklyn Printer

By Willis H. Carrier

It is interesting to look back only a little more than a quarter of a century and be reminded that at that time air conditioning was only the very crudest form of ventilation.

Humidification when attempted was usually accomplished by the sprinkling of floors, or the ejection of steam directly into rooms in which it was desired to raise the moisture content.

The instruments for measuring the moisture content of the air were crude and the reference data upon which determinations were based were comparatively inaccurate and covered only an extremely limited range.

"The supermarket with its ever-increasing use of refrigeration is on its way."

MCCRAY SUPPORTS NEW MOVEMENT IN FOOD STORES

KENDALLVILLE, Ind.—The biggest development in commercial food refrigeration today, in the opinion of officials of the McCray Refrigerator Corp., is the coordinated food store.

"A department store in foods" is what R. J. Rehwinkel, McCray advertising manager, terms it. And Chief Engineer Hopkins adds that it is the answer of the smart independent food merchant to the chain store.

The coordinated food store is not a grocery, nor a meat market, not a bakery, nor a delicatessen, not a confectionery, but a combination of all seven, plus a few extras.

It is designed to furnish the family buyer with everything needed in the way of food supplies, and to save distribution costs by cutting overhead and by consolidating clerking and delivery expenses.

The proper places for the various display cases, the position of the walk-in cooler, the placement of wall-type cabinets, and the connection of the refrigerating machinery to the various well-distributed cabinets are all among the major problems presented by these food store projects.





"That manufacturers had enough confidence in their products to offer long-term guarantees was startling news for the trade and helped increase the widening acceptance of electric refrigeration among the public. This announcement was among the big news stories in 1931."

## GENERAL ELECTRIC, FRIGIDAIRE ANNOUNCE

### MILESTONES

FOR INDUSTRY, PEOPLE,  
COMPANIES, TRENDS

### ANNOUNCEMENT

With this issue (Jan. 28, 1931) George F. Taubeneck becomes editor of ELECTRIC REFRIGERATION NEWS.

Mr. Taubeneck's observations of the industry in action and his impressions of various cities have been appearing regularly under his name in the "Expansion Valve" and "Off Duty" columns. But these collections of interesting word pictures have represented only a small part of his contribution to the editorial pages.

More laborious have been the preparation of the directories, specifications, and other data on various classes of equipment in the "Buyer's Guide."

Readers who followed the "Battle of the Code" in Chicago during the summer and fall of 1929 will recall his complete and unbiased accounts or that many-sided struggle.

### UNIVERSAL COOLER BUYS ABSOPURE COMPANY

### Develops Refrigerant Drier

SPRINGFIELD, Mass. — Charles Rice, refrigerating engineer, and formerly Copeland distributor in this territory, has invented and put on the market, a new refrigerant drier-filter.

It consists of a 2-in. tube with a 2 1/4-in. head of machined steel, cadmium plated to prevent rusting. The head is of one solid piece, with a hexagonal section to receive a wrench and round section to enclose the strainer assembly.

### LIPMAN COOLS NEW TYPE SELF-SERVICE CASE

### Dairy Man Sees Big Future for Packaged Ice Cream

### B. & O. TRAIN TO HAVE AIR CONDITIONERS

### F-12

Eagerly awaited information on dichlorodifluoromethane, the new refrigerant commonly known as F-12, is supplied in great detail in the Engineering Section of the Dec. 30, 1931 issue.

### GRUNOW, ASSOCIATES FORM GROUP IN CHICAGO TO MANUFACTURE ELECTRIC REFRIGERATOR, RADIO

### G. E. CENTRALIZES CABINET MAKING IN ERIE FACTORY

### BRUNNER CO. ANNOUNCES HOUSEHOLD COMPRESSORS

### Cooke Seal Changed To Rotary Seal Co.

### Montgomery Ward Selling 'Tru Kold'

CHICAGO—Entrance of Montgomery Ward & Co., large mail order house of this city, into the field of electric refrigeration was announced last week when the "Tru Kold" refrigerator went on sale in the Chicago district. Nation-wide distribution through the company's chain of retail outlets is planned for spring.

## THREE-YEAR GUARANTEE

"It didn't take long for the industry to come through with satisfactory display cases which made possible the widespread distribution and acceptance of frozen foods."

### GENERAL FOODS PLACES OFFICIAL O.K. ON NEW FROZEN FOOD CASES

BOSTON—Any doubts as to the availability of satisfactory low temperature display cases, and as to the immediate future of quick-frozen food merchandising have been dispelled by officials of the Birdseye Packing Co., a General Foods Corp. subsidiary.

After running a series of laboratory tests on all low temperature

cases submitted, Birdseye officials have informed certain manufacturers that their cases have been approved. Coincident with this announcement comes news of a big spring and summer sales campaign on Birdseye Frosted Foods throughout the New England states. This campaign will be a straight commercial operation.



"This method of getting service information out in the field represented a radical departure from previous policies."

### Service Information

In line with the policy of refrigerator manufacturers of being more liberal with information on the maintenance of their machines, the Absopure Refrigeration Corp. has started a service plan that should be effective for any company which does not have authorized service men in many parts of the country.

With every domestic refrigerator sold, a booklet is included giving installation instructions, suggestions to the customer on care of the machine, and pointers which will help any service man who might be called in to make adjustments.



Ordering a day's refrigeration. Metering device measures 24 hours current for 25 cents.



"Through the years the purchase of a good many household and commercial refrigerators has been possible by convenient coin meters. This was probably the first."

### Coin-Operated Domestic Machine To Be Marketed by Chicago Firm

CHICAGO—Coin-operated domestic electric refrigerators which can be placed in homes for only the installation cost and with which the user pays for his refrigeration by inserting quarters in the coin mechanism, have been placed on the market by the Automatic Refrigerator Corp. of Chicago.

"Indicative of the industry's increasing tempo and faith in the industry's future, was the decision of the NEWS to publish every week beginning with the issue of Sept. 9, 1931."

NOW—EVERY WEEK

"Written to be Read On Arrival"

# Congratulations!

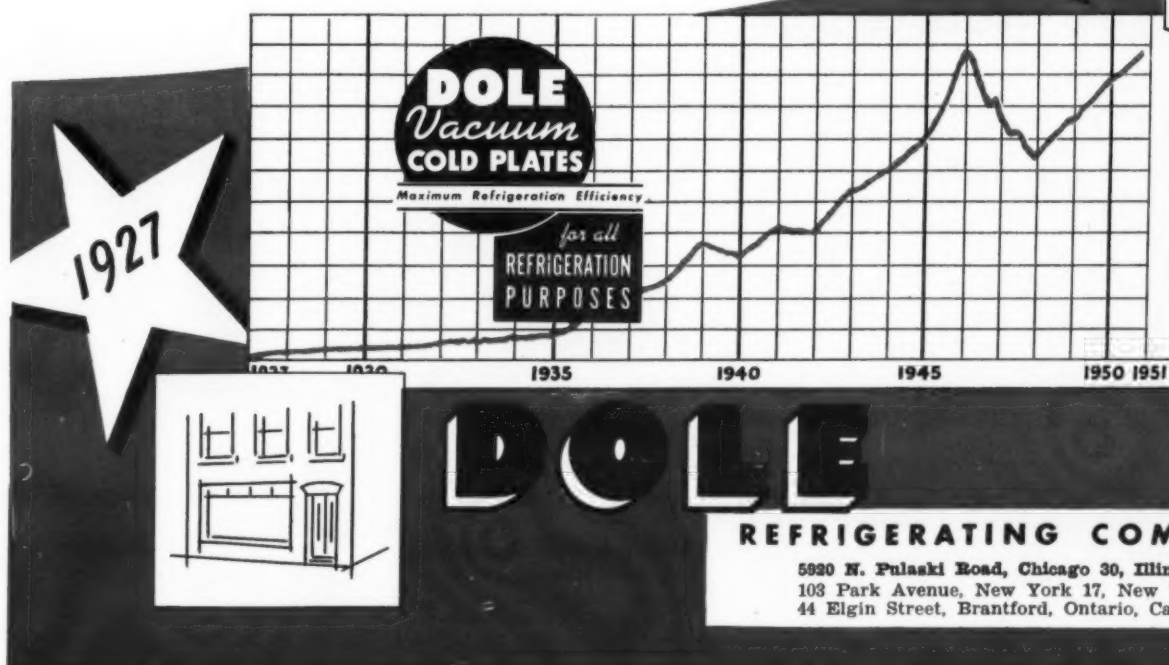
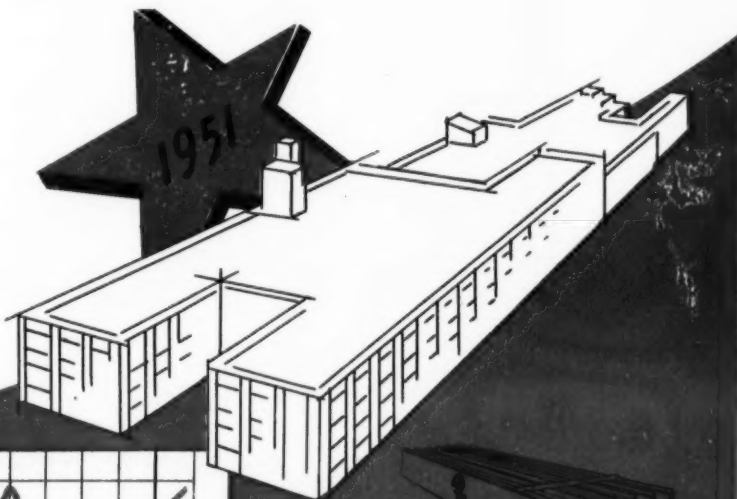
## WE GREW UP TOGETHER

The NEWS is warmly to be congratulated not only for having attained the mature age of twenty-five years in publishing but for its splendid record during those years of comprehensive news coverage and for its fearless championship of the industry. Twenty-five years is a long time in publishing . . . longer than many publications are able to continue until merger or annihilation. You're 25 years old this year!

You and we have grown up together. A year after the NEWS began its career DOLE was launched as a manufacturer of refrigeration equipment. The start was modest and unassuming. Sales at first were small but as the years passed, quarters were thrice outgrown until today a huge plant is required to fabricate the many products bearing the DOLE trade mark. We're 24 years old now but next year we'll be 25.



DOLE success in the refrigeration and air conditioning field began with the invention and development of the vacuum cold plate. DOLE ideas have been copied but superior quality standards in manufacture, sound selling policies, and nationwide service facilities have made DOLE the original and outstanding cold plate evaporator. Refrigeration and air conditioning are served through DOLE plate banks, quick-freeze shelves, soda fountain units, truck holdover plates and Ice-Cels.

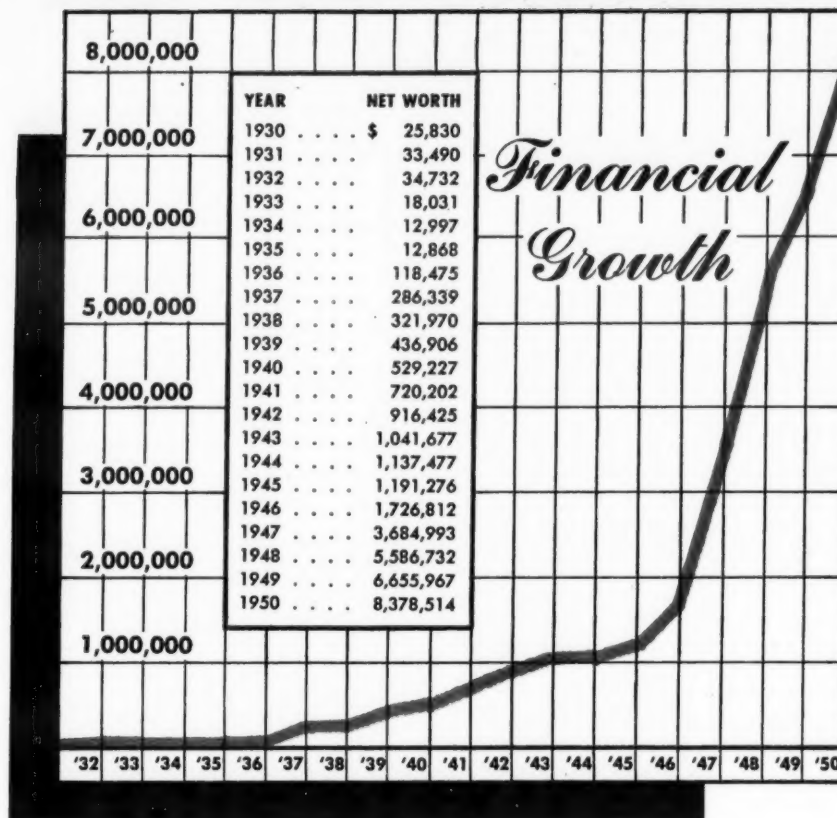
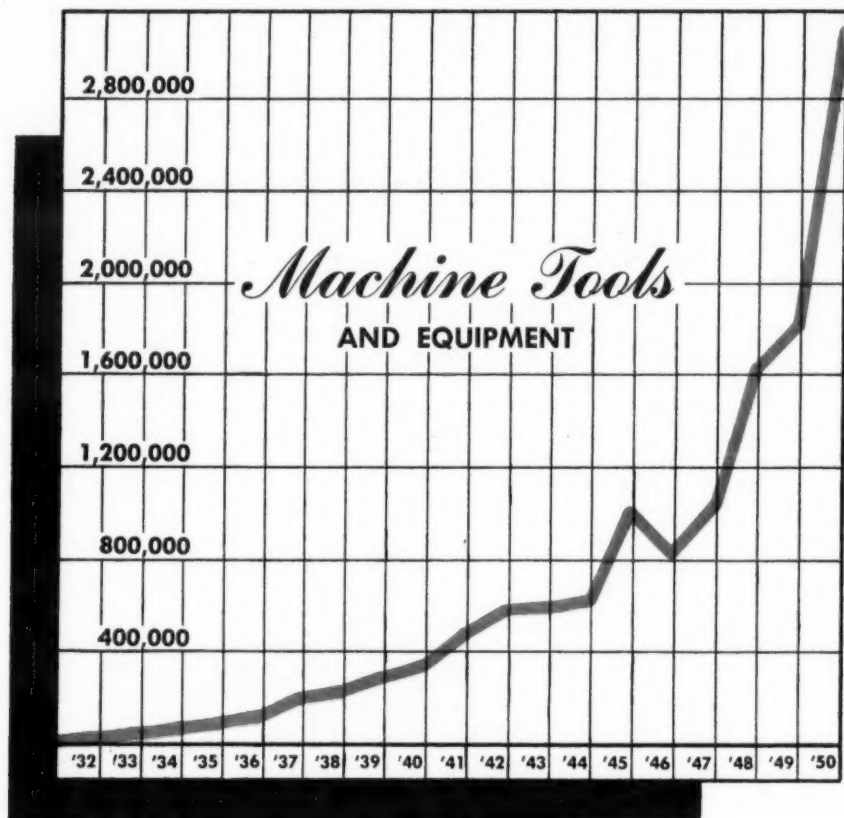




# TECUMSEH is making history in the refrigeration industry

Tecumseh Products Company had its beginning in 1931. Its basic "Idea" . . . the application of mass production and precision machining methods to the manufacture of compressors and condensing units. Its "Vision" . . . more units, better units, less expensive units that would result in a wider distribution of complete refrigeration equipment. Its "Market" . . . manufacturers of complete products who were not set up to produce their own units and who could not find competitive sources in an industry that was largely influenced by a few major manufacturers.

In establishing its competitive position within the refrigeration industry, Tecumseh has pioneered many of the major advances made in unit design and manufacture . . . these reasons, plus the team work of its highly skilled workmen, has made it possible for Tecumseh to set such high production standards.

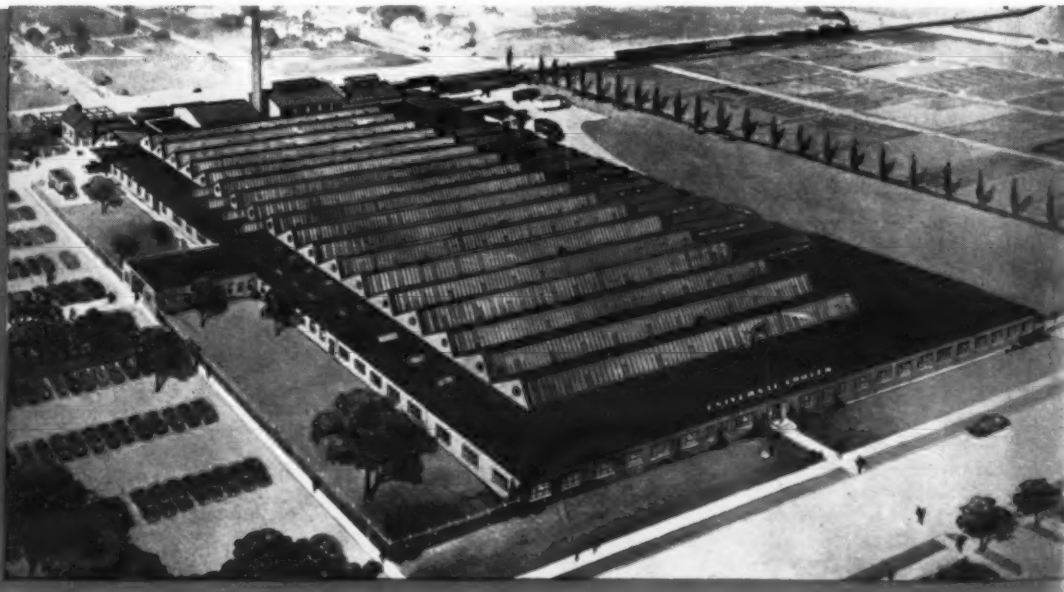


Seldom does a business stand still in America. It either grows and contributes to the national wealth . . . or it fails in its opportunity to serve, it dies and a new one takes its place. The growth of Tecumseh Products bears this out, and it can be best illustrated by the graphs that show its physical and financial growth. During its 21 years of operation Tecumseh has executed 7 plant expansion programs increasing its plant size from 49,700 square feet to 646,000 square feet of floor space. In this same period the latest type of machine tools and equipment were added, until today their replacement value would be well over 3 million dollars.

No business can be successful without a sound financial growth, which is so graphically illustrated here. It is the net result of an "idea", "vision" and sound management, a combination that only prospers in a free economy and free competitive system.

The Tecumseh Plant at Tecumseh, Michigan has 550,000 square feet of floor space

The Universal Cooler Plant at Marion, Ohio has 86,000 square feet of floor space



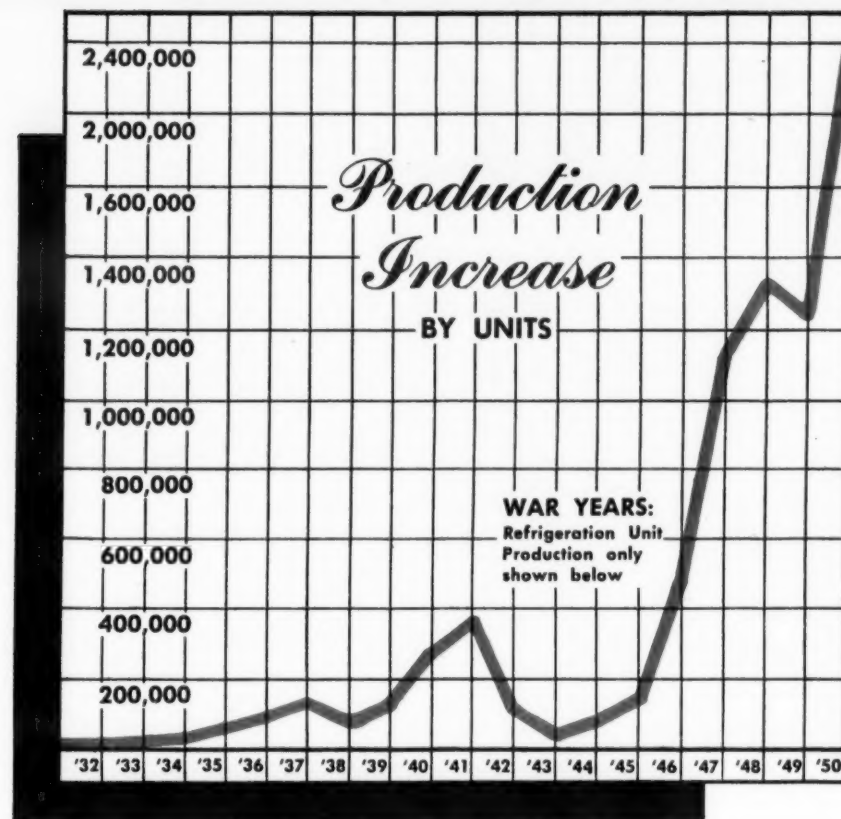


An idea in 1931  
has grown to

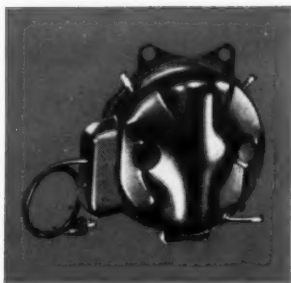
**8,628,204**  
compressors in the field

Ray W. Herrick, President, Frank K. Smith, Sales Manager, Curtis M. Brown, General Manager, Refrigeration Division, and Jens K. Touborg, Chief Engineer, are the four men who started with an "Idea" in 1931 and had the "Vision" to see it through. Herrick, with his vast experience in production tooling and sound financial ideas of turning a large share of the profits back into the business . . . Smith, with his intimate knowledge of the supply structure of the industry, pointed up the great market possibilities of independently produced units . . . Brown, with his ability to coordinate engineering production, management and sales . . . Touborg with his practical engineering knowledge, "to make it better, make it faster, or make it at less cost."

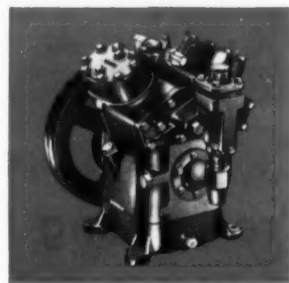
This is the team that built Tecumseh to be the largest independent producer of refrigeration compressors in the world with production in 1950 hitting 2,465,000 units — an all-time high.



The most complete line of compressors and condensing units in the Industry.



● The Tecumseh compact compressor is the answer to the designer's problem of increasing food storage space without increasing overall outside cabinet dimensions. It represents the highest achievement in refrigeration development with respect to low first cost, compactness of design, and versatility of application.

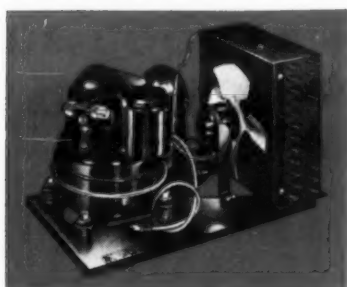
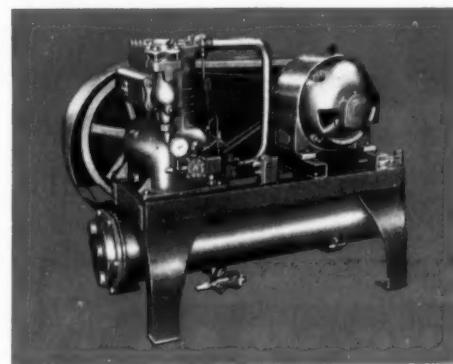


● The VFP four cylinder compressor is the newest addition to the Universal Cooler line of conventional compressors. Designed for 2 or 3 H.P. applications and fitted with an oil pump for forced feed lubrication, it represents the last word in conventional compressor design.

● The Tecumseh single cylinder compressor has been accepted by the industry for many years. Utilizing either a static or fan-cooled condenser, this compressor is used exclusively on a great many nationally advertised household refrigerators and small commercial equipment.



● The 15 H.P. water-cooled remote condensing unit is the largest model in the line at the present time. Manufactured at the Universal Cooler Division of Tecumseh Products, it is used on a wide range of heavy-duty commercial applications.

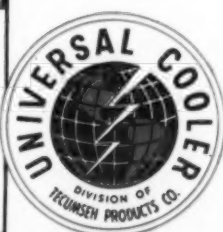


● The Tecumseh 1/2 H.P. fan-cooled condensing unit is the first choice of manufacturers of self-contained window and console air conditioning units. Smooth and quiet in operation, the Tecumseh twin is ideally suited to this type of application.

Complete data on these Tecumseh and Universal Cooler units is available on request. Write today for specifications on the type and size unit you require in your particular application.

**TECUMSEH PRODUCTS**  
TECUMSEH, MICH.

*Company*



**UNIVERSAL COOLER**  
MARION, OHIO

*Division*

EXPORT DEPT.: 2111 WOODWARD AVE., DETROIT, MICH.





# We're looking to the *-opportunity*

Sure we're proud of Victor's accomplishments in the past quarter-century...our 5 plants in 2 states...the long list of enthusiastic Victor users...our energetic and alert distributor-dealer friends who have made this growth possible.

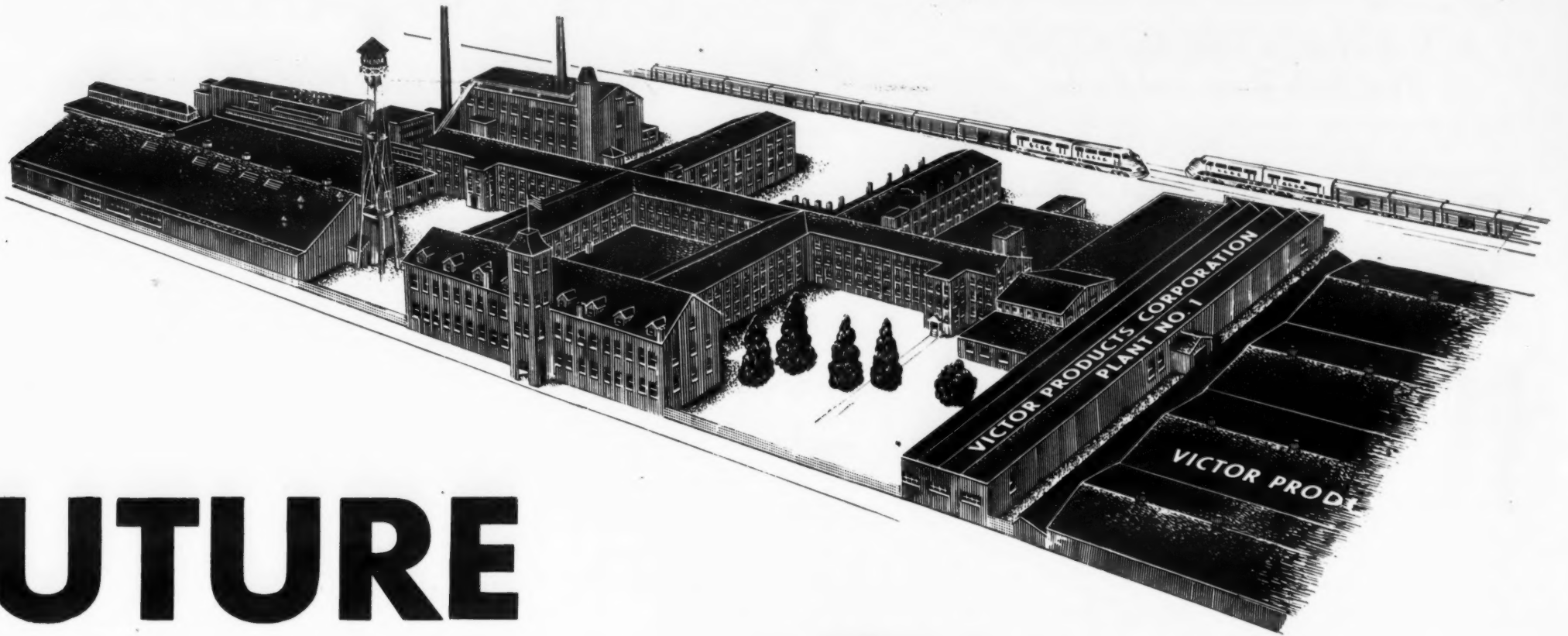
But! We're looking *forward*—not backward!

Victor is still growing, still expanding, still building for a great future in a great industry.

**THIS YEAR,** the Victor Line is the most complete line of quality commercial refrigerators and freezers available anywhere.

# Victor





# FUTURE

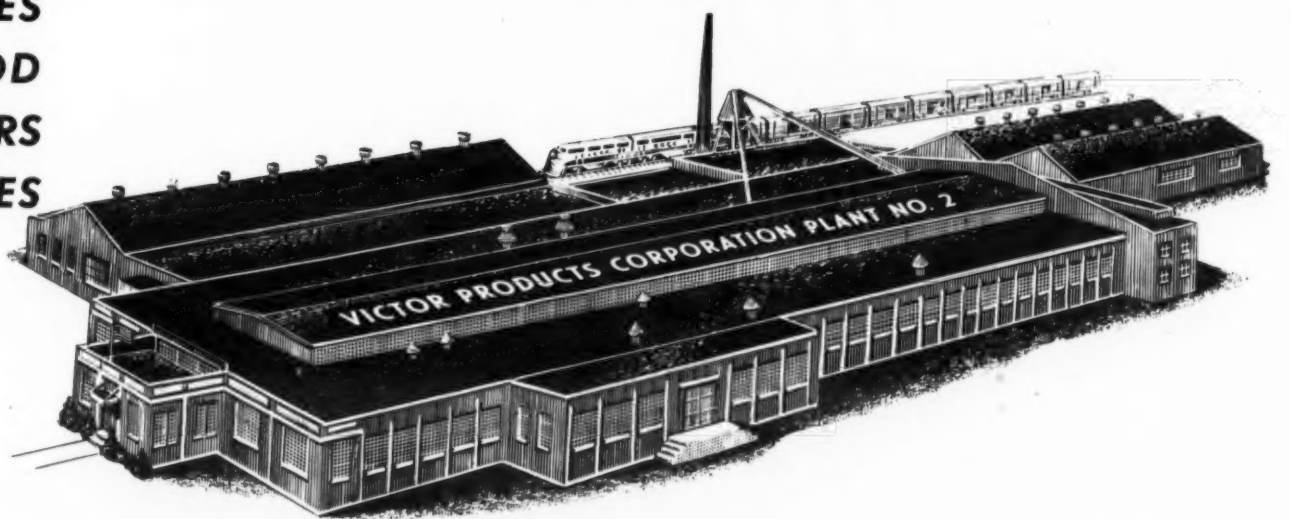
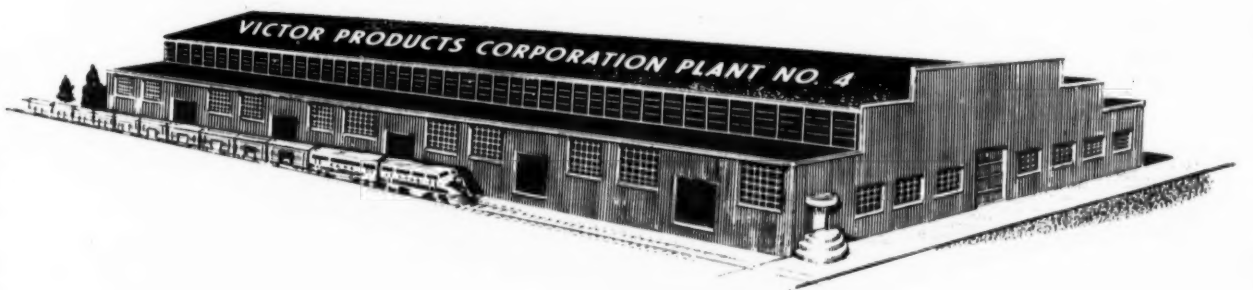
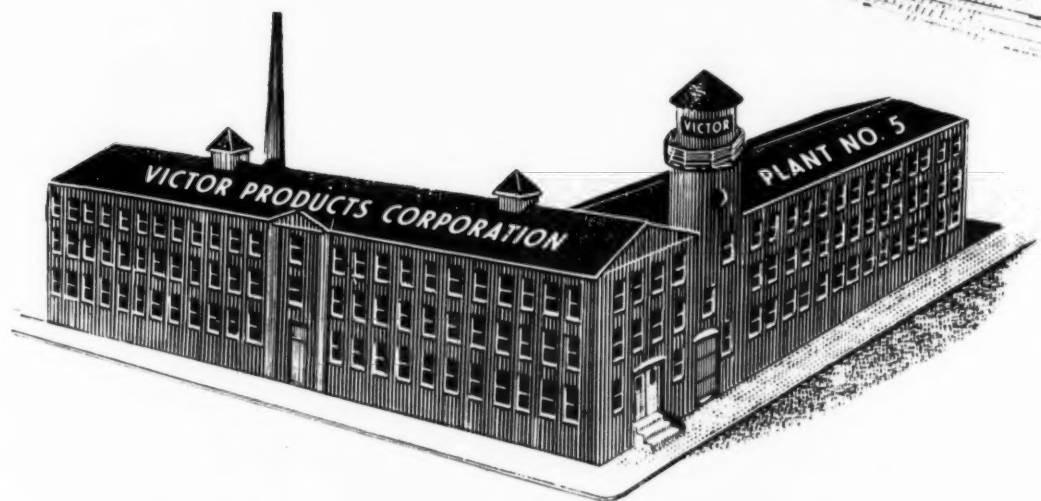
**THIS YEAR,** large space Victor advertising is telling the Victor story to millions of readers of leading national magazines—making thousands of new friends and customers for Victor dealers all over the country.

**This year, team up with VICTOR.**

There's still room for wide-awake distributors and dealers to join the Victor parade to greater sales and profits!

## VICTOR

QUICKFREEZERS • LEVEL-LOAD MILK COOLERS • STANDARD MILK COOLERS  
REFRIGERATED ROOMS • MEAT CASES  
BEVERAGE COOLERS • FROZEN FOOD  
DISPLAY CASES • SPOT MERCHANDISERS  
ELECTRIC STERILIZERS • DAIRY CASES  
FRUIT JUICE MERCHANDISERS



# PRODUCTS CORPORATION

HAGERSTOWN, MARYLAND





"The reverse cycle or 'heat pump' system of air conditioning was known and in use in 1932."

## A. R. Stevenson Tells About Cycle That Both Heats and Cools

CLEVELAND—Picturing a refrigerating machine that will serve the dual functions of heating in winter as well as cooling a building in summer, A. R. Stevenson, Jr., stimulated considerable conjecture among engineers who gathered to hear his talk on the "Application of Refrigeration to Heating and Cooling of Homes" before the joint membership of the A.S.R.E. and the A.S.H.V.E.

For several years the possibilities of providing both heating and cooling operations with one machine have interested Mr. Stevenson, a General Electric engineer. Associated with him in the preparation of the paper were F. H. Faust and E. W. Roessler, also General Electric engineers.

"This headline about business failures was pretty true of the business community in 1932, but the refrigeration industry continued to grow."

### MANY BUSINESS MEN FAIL; DON'T KNOW WHY

WASHINGTON, D. C.—An analysis of bankruptcy records will show that many retail merchants fail in business without being able to give the causes, Dr. Julius Klein, Assistant Secretary of Commerce, said in a recent radio address.

"Salesmen were probably prone to exaggerate capacities a little bit, and this led to agitation for standard rating data in effect today."

### Honest Specifications

From many quarters come reports that dealers and salesmen—and even some manufacturers—are representing the capacity of the refrigerators they are selling in gross cubic feet, rather than in the standard net cubic feet rating.

Thus these salesmen are presenting what are really four-cu. ft. boxes as five-cu. ft. models; and hence are able to offer what appears to be highly attractive prices when compared superficially by the uninitiated with refrigerators sold according to the standard rating in net cubic feet.

It is the consensus of opinion among members of the Refrigeration Division of the National Manufacturers Association that all capacity ratings upon which electric refrigerators are sold should be in terms of net cubic feet, according to the adopted formula.

"During 1932 the NEWS published the first complete household refrigerator specifications, so complete in fact that manufacturers' opposition forced following specifications to be more condensed."

## SPECIFICATIONS OF HOUSEHOLD ELECTRIC REFRIGERATORS

### Kelvinator

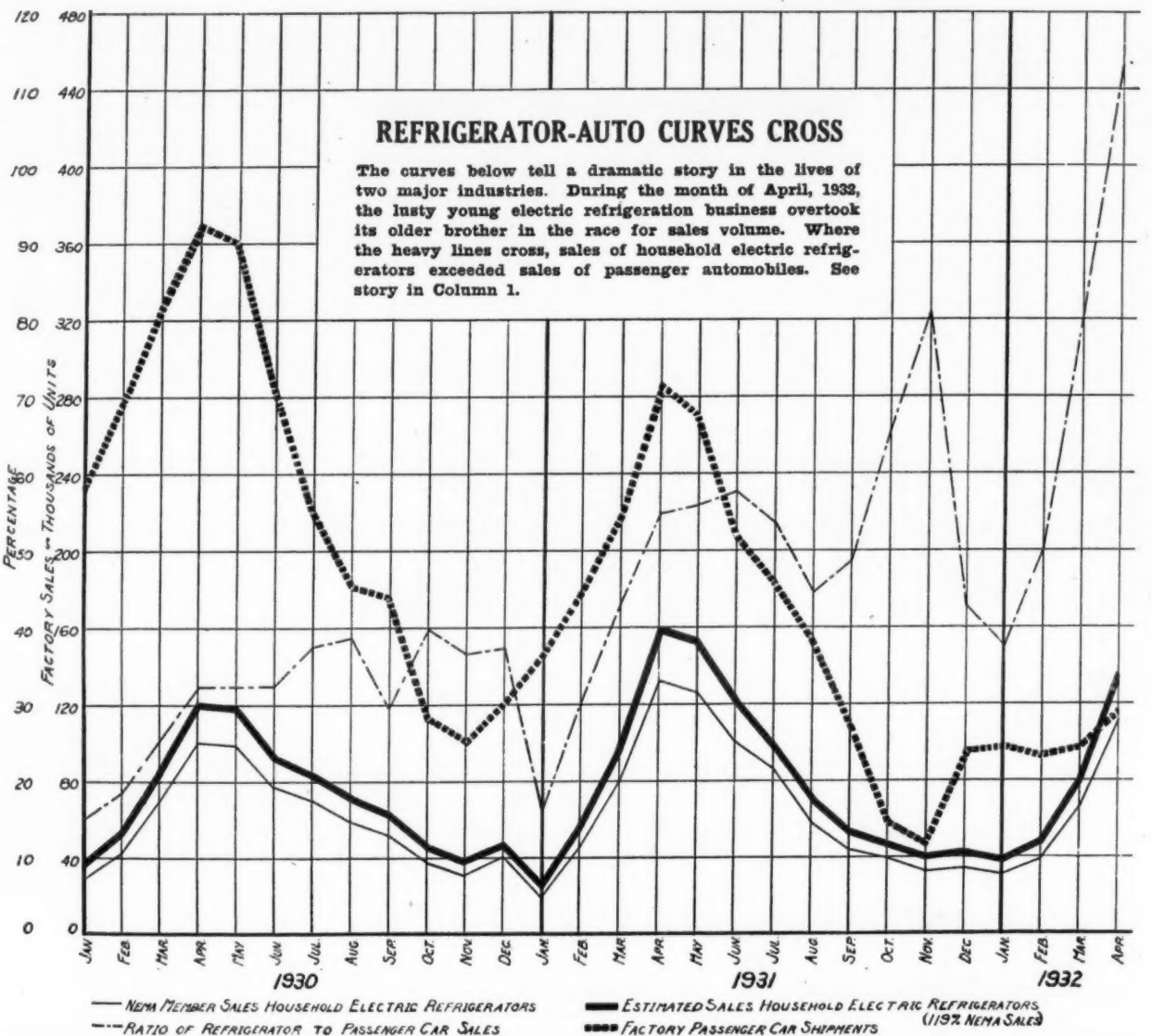
KELVINATOR CORP.  
14250 Plymouth Rd., Detroit

Model or Catalog No.	D-22	D-14	D-11	D-8	D-6	S-4	S-5	S-7	S-9	PK-7	PK-6	PK-5	PK-4	K-7	K-6	K-5	K-4
<b>CABINET SPECIFICATIONS</b>																	
Overall dimensions, including hardware	70 1/2	70 1/2	68 1/2	66 1/2	58 1/2	52 1/2	58	58 1/2	63 1/2	67	66 1/2	51 1/2	49 1/2	57	56 1/2	51 1/2	49 1/2
Height (inches)	67 1/2	67 1/2	65 1/2	63 1/2	55 1/2	49 1/2	55 1/2	55 1/2	60 1/2	64 1/2	63 1/2	48 1/2	46 1/2	54 1/2	53 1/2	48 1/2	46 1/2
Width (inches)	28 1/2	28 1/2	28 1/2	27 1/2	27 1/2	23 1/2	23 1/2	23 1/2	27 1/2	28 1/2	28 1/2	25 1/2	24 1/2	25 1/2	25 1/2	25 1/2	24 1/2
Depth (inches)	24 1/2	24 1/2	24 1/2	24 1/2	24 1/2	20 1/2	20 1/2	20 1/2	24 1/2	24 1/2	24 1/2	21 1/2	20 1/2	21 1/2	21 1/2	21 1/2	20 1/2
<b>INSIDE DIMENSIONS OF CABINET LINER</b>																	
Height (inches)	41 1/2	41 1/2	39 1/2	37 1/2	29 1/2	23 1/2	29 1/2	29 1/2	34 1/2	34 1/2	34 1/2	30 1/2	29 1/2	30 1/2	29 1/2	24 1/2	24 1/2
Width (inches)	18 1/2	18 1/2	18 1/2	18 1/2	18 1/2	15 1/2	15 1/2	15 1/2	18 1/2	18 1/2	18 1/2	15 1/2	14 1/2	15 1/2	15 1/2	12 1/2	12 1/2
Depth (inches)	18 1/2	18 1/2	18 1/2	18 1/2	18 1/2	15 1/2	15 1/2	15 1/2	18 1/2	18 1/2	18 1/2	15 1/2	14 1/2	15 1/2	15 1/2	12 1/2	12 1/2
Thickness of exterior metal (gauge)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Thickness of interior metal (gauge)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Number of refrigerator doors	2	2	2	2	2	1	1	1	2	1	1	1	1	1	1	1	1
<b>STORAGE CAPACITY</b>																	
Gross food storage capacity (cu. ft.)	22.27	14.55	11.88	8.2	6.38	4.3	5.14	7.04	8.82	6.9	5.94	4.94	4.0	6.9	5.94	4.94	4.0
Net food storage (cu. ft.) (Nema rating)	10	5	4	3	3	3	4	4	4	3	3	3	2	4	3	3	2
Number of shelves	41.84	26.36	22.73	16.3	12.16	8.91	11.05	14.69	16.57	14.2	12.16	10.34	8.21	14.2	12.16	10.34	8.21
Total shelf area (sq. ft.) (Nema rating)	11 1/2	11 1/2	11 1/2	11 1/2	10 1/2	12 1/2	11 1/2	10 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2
Greatest distance between any two shelves	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	4 1/2	4 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Shortest distance between any two shelves	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	4 1/2	4 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
<b>ICE CUBE TRAYS</b>																	
Number of ice cube trays	9	7	7	5	4	3	3	4	4	3	3	3	2	3	3	3	2
Inside dimensions of trays (inches)																	
Length (at top of tray)	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 1/2	9 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2
Width (at top of tray)	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Depth (single)	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Depth (double)	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
Depth (triple)	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Number of cubes produced at one freezing	243	189	189	135	108	42	42	108	108	108	84	63	42	108	84	63	42
Weight of ice cubes produced (lbs.)	34.0	28.5	28.5	23.0	20.25	8.0	8.0	16.5	16.5	11.0	8.8	6.8	4.5	11.0	8.8	6.8	4.5
<b>COMPRESSOR SPECIFICATIONS</b>																	
Compressor capacity (lb.) (ASRE rating)	1-3	1-3	200	200	200	112	112	200	200	164	112	92	82	164	112	92	82
Motor size (hp.)	1-3	1-3	1-4	1-4	1-4	1-6	1-6	1-6	1-6	1-4	1-5	1-6	1-10	1-5	1-6	1-10	1-10
<b>WEIGHT</b>																	
Net weight of complete refrigerator (lbs.)	1405	1075	1000	690	600	352	375	525	640	496	452	411	375	463	424	380	340
Total shipping weight (lbs.)	1405	1075	1000	690	600	352	375	525	640	496	452	411	375	463	424	380	340
<b>PRICE</b>																	
Retail price, without installation (before additions for freight)	\$730.00	\$600.00	\$515.00	\$425.00	\$381.00	\$219.00	\$247.00	\$308.00	\$375.00	\$287.50	\$254.00	\$228.50	\$199.50	\$233.00	\$199.50	\$177.00	\$149.50
<b>CABINET MATERIALS</b>																	
Make of cabinet	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator	Kelvinator
Material used for exterior	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal
Make of exterior metal	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron
Material used for frame	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood
Make of interior metal	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron	Enameling iron
Finish of shelves	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned	Tinned
<b>INSULATION</b>																	
Make of insulation	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex	Kelvatex
Nature of insulating material	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable
Bulk or formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs	Formed slabs
<b>FINISH</b>																	
Cabinet finish (exterior)	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer	K models—lacquer
Colors offered as standard	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white	D models—white
Colors offered as optional	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white	gray trim; all others—white
<b>CABINET FINISH (INTERIOR)</b>																	
Make of interior finish	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White	White
<b>HARDWARE</b>																	
Make of hardware	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast	Die cast
Process of manufacture	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium	Chromium
<b>DOORS</b>																	
Material used for breaker strip	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber
Material used for gasket	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber	Rubber



"For the first time in April 1932 sales volume of the refrigerator industry exceeded that of the passenger car industry. It was sort of like coming of age to the proud young industry."

## X Marks the Spot Where a New Record Was Made



"Sub-zero temperatures weren't unheard of in those days, as this story shows, but such jobs were pretty rare."

### B-K MACHINES REACH TO 153° BELOW ZERO

NEWARK—Engineers of the Brunswick-Kroeschell division of the Carrier Engineering Corp. believe they have reached a "new low" in commercial refrigeration temperatures by the design of a plant which produces -153° F. for a special chemical process used in producing a synthetic resin.

H. L. Laube, sales manager, points out that this temperature is 80° lower than the coldest temperature recorded by Byrd.

### GIBSON DEVELOPS 3-TEMPERATURE 14-CU. FT. MODEL

GREENVILLE, Mich.—Two separate and insulated compartments have been incorporated into the new 14-cu. ft. de luxe refrigerator which the Gibson Electric Refrigerator Corp. has just announced.

Other features of the new model are a water cooler (which may be connected to city water mains as a pressure cooler, or used as a bottle type using a bottle on top of the cabinet), ice cube capacity for producing 210 cubes in one freezing, interior electric lights, a low-temperature chamber, and an "air conditioning" feature of the normal temperature compartment.

"The NEWS always sought the accumulation of pertinent industry statistics, and the setup inaugurated at that time has continued through the present day."

### PLAN MONTHLY SURVEY OF SALES & DEALER STOCKS

HOT SPRINGS, Va.—Industry publicity and statistics, manufacturing standards and commercial practices, guarantees and terms, and other problems of mutual interest to electric refrigeration manufacturers were discussed at a two-day session of the Refrigeration Division which met here May 17 and 18 in company with other divisions and sections of the National Electrical Manufacturers Association.

Unofficially announced was the action of the executive committee approving a plan proposed by ELECTRIC REFRIGERATION NEWS for collecting monthly figures from manufacturers showing sales and stocks on hand for all classes of refrigeration equipment. The experience of the Nema organization, accumulated during the year through the collection of statistical data from member companies, will be made available to the statistical department of ELECTRIC REFRIGERATION NEWS.

"Some big companies who had been part manufacturing and part contracting were consolidated into corporate entities, and established distributor-dealer setups."





"Prices really were getting down close to rock-bottom as the Depression cut deeper into purchasing power."

## FRIGIDAIRE TO FEATURE \$112 PRICE

DAYTON—Delivered and installed for \$112 (plus freight)—that's the lever with which Frigidaire dealers this fall will attempt to pry off the lid to a large new market (lower income brackets) that has never before been cultivated assiduously by a pioneer manufacturer of electric refrigerators.

This installed price of \$112, for a 4-cu. ft. (net capacity, Nema rating) Moraine model Frigidaire is practically equivalent to an f.o.b. list price of \$100, and will put Frigidaire directly in competition with new manufacturing concerns which have made their bid for business this year on a price of \$99.50. This 4-cu. ft. model Frigidaire formerly sold for \$130 f.o.b. Dayton, and approximately \$150 installed.

"Department stores were beginning to wet their feet a little bit in the merchandising of refrigerators, and the manufacturers were taking note of a trend."

## G.E. ADOPTS PLAN FOR DEPT. STORE APPLIANCE SALES

CLEVELAND—A new plan of merchandising a complete line of electrical household appliances through large department stores in metropolitan trading areas, to be known as the "General Electric Controlled Sales Plan," has been devised by Ralph C. Cameron, manager of department store activities for the merchandising division of the General Electric refrigeration department here.

"With the advent of 'Dulux' came a new era in the finish of refrigerator cabinets of all types."

## DUPONT DEVELOPS NEW FINISH WITH SYNTHETIC RESIN

PARLIN, N. J.—A new refrigerator finish has just been developed by E. I. du Pont de Nemours & Co., whose industrial finishes division is located here. "Dulux," as the new product has been named, is a synthetic resin finish using a binder material composed of distinct chemical compounds which form a tough, flexible resin binder for the pigment of the finish.

"Very few manufacturers tried to set up their own retail stores, and those who did failed."

## BOHN REFRIGERATOR CO. TO OPEN RETAIL STORES

PHILADELPHIA—The Bohn Refrigerator Co., of St. Paul, Minn., has selected this city as its base of operations in the establishment of retail stores in Pennsylvania. The company will immediately open its first retail store in Philadelphia at 1204 Walnut St.



"There was a tendency on the part of some dealers to take on any merchandise if the price could be made cheap enough, and this editorial warned against such temptations."

## A Message To Dealers

Electric refrigeration is a good business. Hundreds of you gentlemen who are now reading this front-page editorial have made money selling electric refrigerators during the last few years. A rising tide of public acceptance for this means of adequate food preservation has helped enable you to maintain your positions and forge ahead in the communities which harbor your business, despite a general depression which has laid low most of your neighbors.

By the same token, electric refrigeration can ruin your business and blast your reputation. For today, unfortunately, all those who buy electric refrigerators are not going to be satisfied. Having trusted implicitly in the well-established idea that electric refrigerators are now highly perfected mechanisms, some of them have bought shoddy, under-priced merchandise blindly.

It's a cinch that an electric refrigerator is not to be trusted if the manufacturer has not made his name well known, if he is not using quality parts and materials, if he has been unwilling to offer his product for inspection and say:

"I believe that this is a good refrigerator; and I believe it so firmly that I am putting my name on it, telling the world about it, and risking my money and my reputation that it will give good service over a period of years. It's all mine, and I'm proud of it."

If you've never heard of it, don't buy it.

"This was one of the first moves to bring air conditioning out of the strictly engineering-contracting realm and into the specialty selling field."

## SPECIALTY DEALERS TO SELL CARRIER COOLERS

NEWARK, N. J., June 27.—(By Special Wire to ELECTRIC REFRIGERATION NEWS)—Certain types of air conditioning equipment have now been developed to the point where they can be sold by specialty merchandising outlets, engineers of the Carrier Corp. showed here this afternoon before a group of radio and refrigeration distributors.

Up until this time air conditioning has been primarily an engineering business and some phases of it will always require individual engineering for each installation, but the portable room cooler and Carrier's atmosphere cabinet are two that are now suited to widespread merchandising effort, it was announced.

"Patent pools had been formed on various refrigeration parts and accessories, but most of them have failed to hold up through the years."

## FRIGIDAIRE LICENSES 48 COMPANIES TO USE COLD CONTROL PATENTS

DETROIT—Four manufacturers of refrigeration control devices have been licensed by Frigidaire Corp. to make cold controls under the Blackmore and Summers patents, and 48 manufacturers of household electric refrigerators have been licensed to use the controls according to information from sources in the trade. The licensing agreement comes as a result of the infringement suit won by Frigidaire against Jesse Moore, a Majestic dealer in Des Moines, Iowa, in which Judge C. A. Dewey of the U. S. District Court upheld the validity of Frigidaire's Blackmore patent 1,658,323 and the Summers' patent 1,819,979.

"As we remember it, this was to be one of those temporary taxes, but it's still with us today."

## HOUSE PASSES 5% REFRIGERATOR TAX

WASHINGTON, D. C.—The Revenue bill as passed by the House of Representatives April 1 carries a tax of 5% of the manufacturers' wholesale price on "Household type refrigerators (for single or multiple cabinet installations) operated with electricity, gas, kerosene, or other means (including parts therefore sold on or in connection therewith or with the sale thereof)."

The bill also provides the same tax on "component parts."

"Some of the promotion stunts to prove the worth of a particular product were dramatic—and drastic."

## Frigidaire Dealer Burns Unit

DENTON, Tex.—"We will attempt to burn this Frigidaire in front of our store at 7:30 tonight," read a sign on a McDowell-Jacobsen Hardware Co. truck which passed through Denton streets recently.

Capitalizing on Ripley's "Believe It or Not" column which recently pictured an electric refrigerator which came undamaged through a fire which destroyed an entire building, the company set fire to a Frigidaire which they had soaked in kerosene.

Three hundred townspeople witnessed the burning refrigerator demonstration, according to Joe B. Wilkins, one of the managers of the firm.

"Crosley had been a factor in the radio business and its entrance into the refrigeration field in rather modest fashion was no great surprise."

## CROSLLEY TO MARKET LOW-PRICED LINE OF ELECTRIC REFRIGERATORS

CINCINNATI, Ohio—Low-priced refrigeration will be offered by Crosley radio distributors and dealers throughout the country this spring, according to Neil Bauer, sales manager of the Crosley Radio Corp.

"When Consumers' Research came out with its first coverage of electric refrigerator models, the NEWS wasn't too impressed by it."

## HERE'S WHAT CONSUMERS' RESEARCH HAS TO SAY ABOUT MECHANICAL REFRIGERATORS

Confidential Bulletin Contains Queer Mixture of Truth Good Advice, Nonsense and Misinformation

"Manufacturers of controls were beginning to develop special devices for refrigeration and air conditioning applications, aimed at providing better operation of the systems of which they were a part."

## Special Control Devices Developed For Air Conditioning Equipment

By D. D. Wile, Detroit Lubricator Co., Accessories Laboratory

Controls for air conditioning equipment include various circuits from the simple control of a single unit by means of a hand switch to the more complicated circuits required to control cooling, heating, and dehumidification. Where a single cooling unit is used, automatic control is accomplished by a wall-type thermostat arranged to start and stop the compressor and fan through a motor-starting switch. The present tendency is toward the combination cooling, heating, humidifying and air-cleaning unit.

When a new thermostat is used and it is desired to control both heating and cooling by a single thermostat, it should be of the three-wire type, making one circuit at low temperature and the other circuit at high temperature.

"The mortality rate in the early days of a young and highly competitive industry is often very high, and this tabulation of manufacturers who had fallen by the wayside as early as 1932 gives testimony to the fact that this held true in the electric refrigeration field."

## NEW THERMO VALVE ANNOUNCED BY ALCO

ST. LOUIS—A Junior Thermo Valve has recently been developed by the Alco Valve Co. to handle refrigerating loads up to two tons. This valve makes possible the application to the smaller jobs of the principles used in the Alco Thermo Valve, Alco engineers recently indicated.

Unlike the larger valve, however, the thermal element of the new Junior Thermo Valve is charged at the factory.

The refrigerant charge is sealed in by special welding and soldering processes.

## Tentative List of Ex-Manufacturers of Household Electric Refrigerators

On this page are listed the names and addresses of manufacturers which—according to the best information we can obtain—have ceased active production and sale of household electric refrigerators.

To each name listed on this page (except those known to have been absorbed by other manufacturers) has gone a letter asking whether or not that concern is still manufacturing electric refrigerators. These letters have either been answered negatively, have not been answered at all, or have been returned unclaimed.

Obviously the list is not complete. Possibly it is not entirely correct. It will be revised at a later date, and probably will be included in the next edition of the REFRIGERATION DIRECTORY.

Readers of the NEWS are requested to furnish any corrective or qualifying information they may have on the above concerns, and to send in additional names of inactive companies for listing.

The editorial staff of the NEWS has been gathering and checking the names on the list presented herewith for the last several months. Chief sources have been H. R. Van Deventer and other industry "old-timers," letter-files of the ELECTRIC REFRIGERATION NEWS, public library periodical files, and a long list of friends in the industry, who have checked information concerning companies located in their various home cities and territories.—Editor.

## Companies Which Have Ceased Manufacturing Household Electric Refrigerators

American Ice Machine Co.  
212 N. Jackson, Glendale, Calif.  
American Refrigerator Co.  
816 S. Haskell Ave., Dallas, Texas  
(Div. of Booth Lumber & Loan Co.)  
American Refrigerator Co.  
(American Beauty refrigerator)  
Harris Bldg., Dayton, Ohio  
Arctic Ice Corp.  
854 McKnight Bldg.  
Minneapolis, Minn.  
Auto Electric Corp. (Blizzard)  
1532 N. 19th St., Milwaukee, Wis.  
Automatic Freezer Corp.  
1716 Ford Bldg., Detroit, Mich.  
Automatic Refrigerating Co.  
618 Capitol Ave., Hartford, Conn.  
Baldwin Refrigerator Co.  
Burlington, Vt.  
Berry Ice Machine Co.  
7344 Kercheval Ave., Detroit, Mich.  
Browning-Drake Electric Refrig. Co.  
West Townsend, Mass.  
Brunswick Refrigerator Co.  
New Brunswick, N. J.  
Bryant Electric Refrigerator Corp.  
New Milford, Pa.  
California Electric Refrigerators, Inc.  
5th & Dwight, Berkeley, Calif.  
Canton Refrigerators, Inc.  
250 W. 49th St., New York, N. Y.  
Calvert Electric Refrigeration Co.  
Woodberry, Baltimore, Md.  
Central Machine Co.  
1050 Mt. Elliott Ave., Detroit, Mich.  
Champion Shoe Machinery Co.  
3711 Forest Park Ave., St. Louis, Mo.  
Chicago Manufacturing Corp.  
307 N. Michigan Blvd., Chicago, Ill.  
Cleveland Iceless Cooler Co.  
971 East 63rd St., Cleveland, Ohio  
Cold Storage Refrigerator Co.  
Eau Claire, Wis.  
Colonial Mantel & Refrigerator Co.  
494 Dumont Ave., Brooklyn, N. Y.  
Commercial Auto Body Co.  
5401 N. Bulmer Ave., St. Louis, Mo.  
Common Sense Ice Machine Co.  
385 Dearborn, Chicago, Ill.  
Cooke Electrical Refrigeration Co.  
14-30 North Green St., Chicago, Ill.  
Deer Co., Inc. A. J.  
Buffalo & West St., Hornell, N. Y.  
Devon Manufacturing Co.  
2 Brooks St., Brighton, Mass.  
Dubois Refrigerator Co., Inc.  
133 E. 16th St., New York, N. Y.  
Eddy & Sons Co., D.  
336 Adams St., Dorchester, Mass.  
Electrofrigid Corp.  
Nauvau, Conn.  
Eskimo Refrigeration Co.  
914 Columbus Ave., Sandusky, Ohio  
Evercold Co., 210 E. 45th St.  
New York City  
Fairfield Manufacturing Co.  
Fidelity Bldg., Portland, Maine  
Fern-Glover Refrigerator Co.  
Linwood Rd. & Penn. R. R.  
Cincinnati, Ohio  
Fessler Mfg. Co. (Femcold)  
19th and Central, Kansas City, Mo.  
Freezel Corp.  
483 Main St., Gardner, Mass.  
Freeze King Corp.  
2430 S. Michigan, Chicago, Ill.

National Refrigerator Co.  
Greenville, Ohio  
North Star Refrigerator Co.  
Chattanooga, Tenn.  
Norwest Sales, Ltd.  
Granville Island, Vancouver, B. C.  
Oklahoma Radio Mfg. Corp.  
1644 E. 15th St., Tulsa, Okla.  
Parker Ice Machine Co.  
San Bernardino, Calif.  
Parker Ice Machine now being made by H. C. Parker, Ltd., 2726 Santa Fe Ave., Los Angeles, Calif.  
Phillips Refrigerator Co.  
393 Keele St., Toronto, Ontario, Can.  
Polaris Electric Refrigerator Co.  
1610 North St., Philadelphia, Pa.  
Polaris Electric Refrigerator Co.  
Logansport, Ind.  
Porter Refrigerator Corp.  
Ninth & Flanders Sts., Portland, Ore.  
Quality Products, Inc.  
Dayton Industrial Bldg., Dayton, O.  
Rauff Manufacturing Co.  
Bogota, N. J.  
Refrigeration Corp. of America, The  
19 High St., Boston, Mass.  
Refrigeration Engineering Co.  
(Coldmaker refrigerator)  
501 Toledo Factories Bldg.  
Toledo, Ohio  
Rome Manufacturing Co.  
Rome, N. Y.  
Romeson Mfg. Co.  
First National Bank Bldg.  
Pittsburgh, Pa.  
Rotax Co.  
380 E. 133rd St., New York, N. Y.  
Royal Refrigerator Co., Inc.  
281 Powell St., Brooklyn, N. Y.  
Sanat Refrigerating Co.  
331 Madison Ave., New York, N. Y.  
Sanitice Corp.  
60 E. 42d St., New York, N. Y.  
J. S. Refrigeration Division  
John Schroeder Lumber Co.  
952 Commerce St., Milwaukee, Wis.  
Schwenger-Klein Co.  
511 Woodland Ave., Cleveland, Ohio  
Simplex Refrigeration Co.  
Belleville, Illinois  
Solid Refrigerating Corp.  
19 Stewart St., Lynn, Mass.  
Steel Products Engineering Co.  
1060 W. Columbia, Springfield, Ohio  
Stroh Products Co.  
909 E. Elizabeth, Detroit, Mich.  
Superior Iceless Refrigeration Co.  
Canton, O., and Cleveland, O.  
Super Oil Heater Sales Co.  
613 Connecticut Blvd.  
E. Hartford, Conn.  
Triumph Ice Machine Co., The  
110-116 E. 70th St., Cincinnati, Ohio  
Universe Corp.  
400 W. Erie St., Chicago, Ill.  
Utility Products Co.  
Hilldale, Mich.  
Ward Electric Refrigeration Co.  
2023 South Michigan Ave.  
Chicago, Ill., and Buchanan, Mich.  
Weir-Wheelock Co., Inc.  
56 Warren St., New York, N. Y.  
Peoria, Ill.  
Williams Refrigeration Co.  
322 E. 95th St., New York, N. Y.  
Willie Co., H. F.  
Crawford, N. J.  
Wisconsin Refrigerator Co., Inc.  
Eau Claire, Wis.  
Edgar Wright Co.  
Brookfield, Mass.  
Zanesville Engineering Corp.  
Zanesville, Ohio  
Zero-Air Corp.  
510 N. Dearborn St., Chicago, Illinois  
Zerovender, Inc.  
42 E. Pearson St., Chicago, Illinois

Barnsmith Refrigerator Co., Chicago, Ill.  
Bluebird Refrigerator Co.  
Long Beach, Calif.  
"Boss" Refrigerator Co., The  
New York, N. Y.  
Brooks Refrigerator Co.  
Buffalo, N. Y.  
Cadillac Tool Co., Detroit, Mich.  
Cercold Refrigeration Co.  
Los Angeles, Calif.  
Chillo Manufacturing Co.  
Chicago, Illinois  
Clothier Refrigeration Co., The  
New York, N. Y.  
Cold Blast Refrigerator Co.  
New York, N. Y.  
Cold Unit Refrigerator Co.  
Chicago, Illinois  
Earnshaw Manufacturing Co.  
Philadelphia, Pa.  
Electric Refrigeration Co.  
Newark, N. J.  
Electrical Refrigerating Co.  
New York, N. Y.  
Frig-O-Matic, Ltd.  
Brantford, Ontario, Canada  
Frigor Refrigerator Co.  
Chicago, Illinois  
Frostmaker Refrigerator Co.  
Chicago, Illinois

## Electric Refrigeration Manufacturers Which Have Been Absorbed by Active Electric Refrigeration Manufacturers

COMPANY	ABSORBED BY
Absopure Refrigeration Corp.	Universal Cooler Corp.
1560 Theodore St., Detroit, Mich.	7424 Melville, Detroit, Mich.
Alaska Refrigerator Co.	Norge Corp.
Muskegon, Mich.	670 E. Woodbridge, Detroit, Mich.
American Electric Corp. (Electric)	Belding Hall Electric Corp.
Belding, Mich.	in turn absorbed by:
	Gibson Electric Refrigerator Corp.
	Greenville, Mich.
American Foundry Equipment Co.	Summerheat Corp. of America
Mishawaka, Ind.	Dowagiac, Mich.
Armstrong Machinery Co., Inc.	General Machinery Co.
E. 3201-19 Riverside, Spokane, Wash.	3509 E. Riverside, Spokane, Wash.
Belding Hall Electric Corp.	Gibson Electric Refrigerator Corp.
Belding, Mich.	Greenville, Mich.
Benedict & Co., Ltd.	Starr Co.
1525 W. Seventh St.	Richmond, Ind.
Clinton, Iowa	
Climax Electrical Refrigeration Co.	Universal Cooler Corp.
Clinton, Iowa	(purch. refrigeration division)
Coldair Corp.	7424 Melville, Detroit, Mich.
8 W. 40th St., New York, N. Y.	Metals & Machine Co.
Electro-Kold Corp.	Springfield, Mass.
151 S. Post St., Spokane, Wash.	E. S. Matthews, Inc.
Everite Products, Inc.	151 S. Post St., Spokane, Wash.
200 Davis Ave., Dayton, Ohio	Truap Manufacturing Co.
Excelsior Motor Mfg. & Supply Co.	Dayton, Ohio
3701 Cortland St., Chicago, Illinois	Cardonale Machine Co.
Frankenburg Refrigeration Co.	Cardonale, Pa.
Belleville, Illinois	Modern Refrigeration Co.
	(change in name)
	later absorbed by:
	North Pole Corp.
	this year changed name to:
	Belleville Refrigeration Co.
	Absopure Refrigeration Corp.
	1560 Theodore St., Detroit, Mich.
	later absorbed by:
	Universal Cooler Corp.
	7424 Melville, Detroit, Mich.
	Baker Ice Machine Co.
	1518 Evans St., Omaha, Nebr.
	Zerosone Corp.
	939 E. 95th St., Chicago, Illinois
	North Pole Corp.
	Belleville, Illinois
	this year changed name to:
	Belleville Refrigeration Co.
	Servel, Inc.
	51 E. 42nd St., New York, N. Y.
	Frigidaire Corp.
	Dayton, Ohio
	Kelvinator Corp.
	14250 Plymouth Rd., Detroit, Mich.
	Belleville Refrigeration Co.
	Belleville, Ill. (change in name)
	Frigidaire Corp.
	Dayton, Ohio
	Apex Electrical Mfg. Co.
	(purch. refrigeration division)
	1067 E. 152nd St., Cleveland
	Kelvinator Corp.
	14250 Plymouth Rd., Detroit, Mich.
	"Whitehead and Kales still in business, refrigeration patents purchased by Kelvinator."

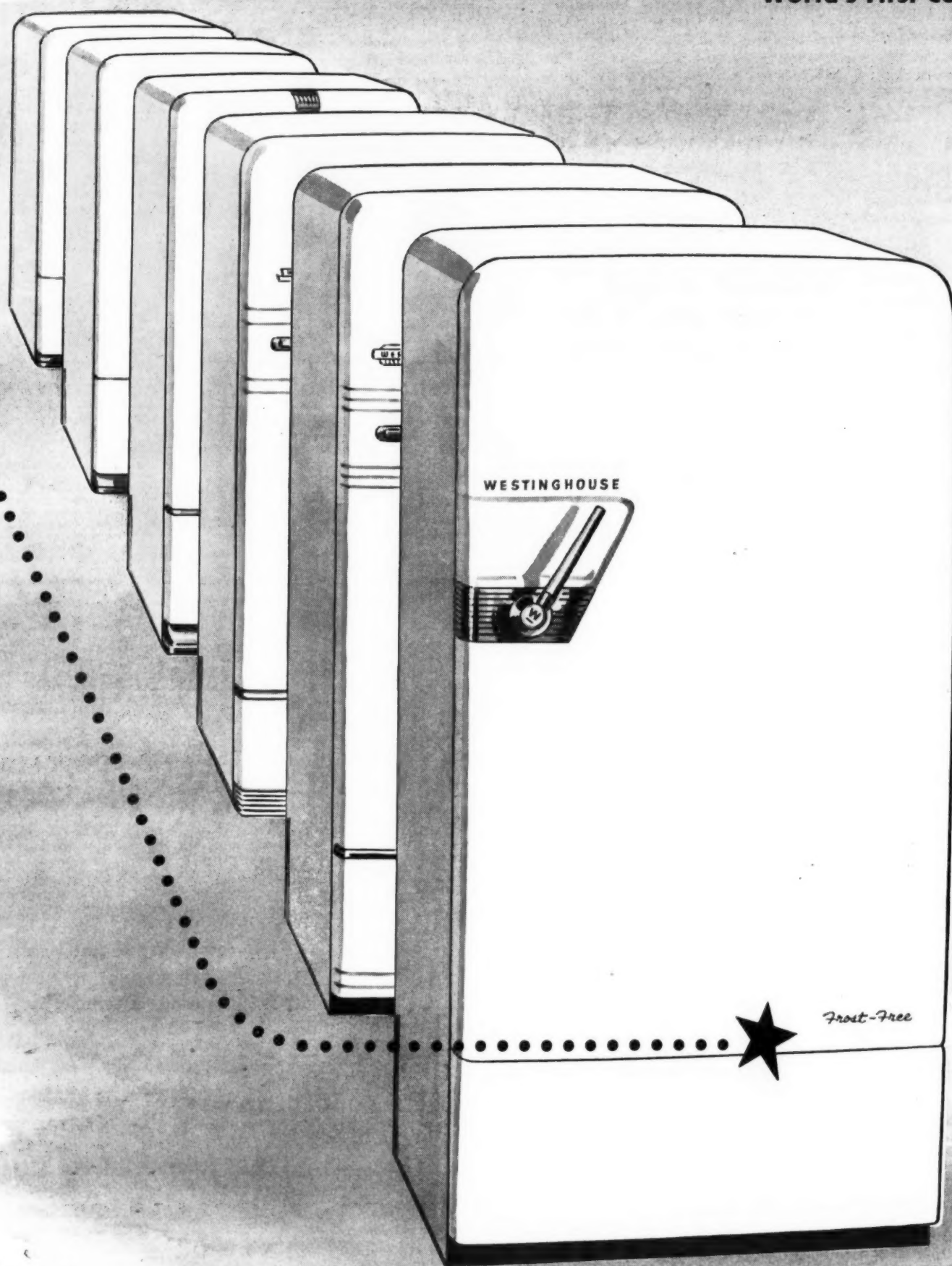
## Companies Said to Have Ceased Manufacturing And Which Cannot be Reached By Mail

A. M. C. Co., Butte, Mont.  
"Ame" Refrigerator Co., The  
New York, N. Y.  
American Engine & Airplane Co.  
Los Angeles, Calif.  
Anderson Co. A. P., Pittsburgh, Pa.  
Angeles Refrigeration Co.  
Los Angeles, Calif.  
Bachman Refrigerator Co.  
Pittsburgh, Pa.  
Balsa Refrigerator Corp.  
New York, N. Y.



# FROST

World's First Completely



... of course, it's electric!

Never-ending Westinghouse research  
has made all-important in millions  
of American Homes, the words ...

**YOU CAN BE SURE...IF**



# FREE\*

Automatic Refrigerator

## Another great Westinghouse contribution to better living!

### Latest in a long list of Westinghouse "FIRSTS"

Through the years since the birth of the refrigeration industry, Westinghouse engineers have held firm to an all-important guiding principle... *true refrigerator value lies in performance—a better product for more economical, more convenient, BETTER LIVING.*

Westinghouse FROST-FREE is an outstanding example of this creed. It's the product of twelve long years of intensive laboratory research and wide field testing. Scores of automatic defrosting systems were tried, and discarded because they did not measure up to the rigid Westinghouse standards.

Today, FROST-FREE stands alone as the world's first and finest completely automatic refrigerator... *there's no other like it!*

Those same high Westinghouse standards have given the homemakers of the world literally hundreds of features which contribute to better living... just a few of these features are shown here.

Perfection is our goal... and we shall strive as mightily during the next twenty-five years as we have in the past to attain it. The name Westinghouse on a product will always mean that there has been no compromise with quality.

Many of these other Westinghouse Refrigerator "FIRSTS" are now standard throughout the industry

- **COLDER COLD...**  
extra cold in the Freeze Chest, and at the same time, safe steady cold in the general storage area.
- **HERMETICALLY-SEALED SYSTEM...**  
first to have it in every model in the line.
- **MEAT KEEPER®...**  
first to provide a proper storage place for meat in the refrigerator.
- **BUILT-IN WATCHMAN...**  
to assure protection against electrical or thermal overload.
- **ONE-PIECE, ALL-STEEL CABINET...**  
of wrap-around construction.
- **"EASY-OUT" ICE TRAY...**  
for quick, easy ice cube removal.
- **SEALED HUMIDRAWERS...**  
glass topped, for best fruit and vegetable storage.
- **SAFE FREON 12...**  
first to use it in a hermetically-sealed unit, first impedance tube to regulate its flow, and first bomb-charging to properly load the correct amount of Freon 12.
- **LIVE RUBBER MOUNTINGS...**  
to assure quiet operation, and eliminate need for bolting down unit when moving refrigerator.
- **SINGLE-UNIT CONSTRUCTION...**  
so Freeze Chest could be inserted through back of cabinet.
- **TESTING AND PROVING...**  
first air-conditioned, humidity-controlled test rooms, and first customer proving kitchens.
- **MICARTA® INNER DOOR PANEL...**  
for longer life.
- **VINYL PLASTIC DOOR GASKET...**  
first to put it on all models, for better door seal, lower operating costs.
- **Automatic Door Closer... Flush-Type Door Construction... Color Plastics... Aluminum Foil on Breaker Strips... Ball-Bearing Hinges... Nylon Bearings.**

...and scores of other features now used throughout the industry.

\*Trade Mark; U. S. Patents Issued Nos. 2,324,309 and 2,459,173

# IT'S Westinghouse

Westinghouse Electric Corporation      Mansfield, Ohio

Look to WESTINGHOUSE for TV's Top Entertainment... Exclusive Telecasts of Outstanding COLLEGE FOOTBALL GAMES... plus WESTINGHOUSE "STUDIO ONE" every week





"By golly, this might still be a pretty good way to suggest saving up for a down payment. Of course, it might take quarters today, but you could give the wife a coin meter and go right on paying for the new unit that way."

### 3 Tips a Day Keep Iceman Away

DETROIT—Another story of how three tips a day kept the iceman away was heard when Mrs. Rose J. Torreano walked into the showroom of Caswell, Inc., General Electric distributor for Michigan, and placed on the counter a box containing \$26 in dimes as the first payment on a model P-6 electric refrigerator.

Salesman S. C. Meyers had been contacting the Torreano family for six months, explaining the merits of electric refrigeration, but the heads of the household felt that the investment was too great. Finally the salesman urged Mr. Torreano to leave a dime "tip" at his plate for Mrs. Torreano.

"This cartoon is a rather grim piece of humor, but it can be appreciated by anyone who was selling—or trying to collect on sales of—commercial refrigerator equipment in the year 1932."



"One refrigerator, two tables, and a radio—to go." (Judge)

### FRIGIDAIRE'S NEW AIR CONDITIONER HEATS AND COOLS

DAYTON—Frigidaire Corp. has just announced a line of individual unit-type air conditioners suitable for commercial establishments, offices, restaurants, shops, private residences, apartments and hospitals. First public showing of the new products is being made to members of the American Society of Heating and Ventilating Engineers and of the American Society of Refrigeration Engineers, meeting in Cleveland this week.

Provision is made to heat, cool and cleanse the air of the room in which the unit is installed. The equipment will lower the relative humidity on hot, sultry days, and in winter, when the heated air becomes dry, will add moisture, Frigidaire engineers claim. Fans deflect and diffuse the air throughout the room.

1932

#### MILESTONES

FOR INDUSTRY, PEOPLE,  
COMPANIES, TRENDS

### Detroit Lubricator Announces New 673 Valve

DETROIT—Engineers of the Detroit Lubricator Co. have just announced the development of a new 673 Genuine Detroit thermostatic expansion valve, "hermetically sealed" and embodying the same yoke type of construction as is used in the new 672 automatic expansion valve.

### GRUNOW INTRODUCES 3 LOW-PRESSURE UNITS

### GOLDBERG, FEDDERS AGENT CHANGES FIRM NAME

CHICAGO—The Auto Radiator Specialty Co. here has just changed its name to the Standard Refrigeration Parts Co. According to H. M. Goldberg, the firm distributes refrigeration products of the Fedders Mfg. Co., Buffalo.

### McCord Co. Devises Way To Fasten Fins To Pipe

### OWENS-ILLINOIS CO. BUILDS 'DUSTOP' FILTER

TOLEDO—In addition to removing dirt and soot from the air of homes and buildings, the new "Dustop" filter placed on the market recently by the Owens-Illinois Co. of this city, removes 99% of hay fever pollen from the air, according to William E. Levis, president of the company.

### New Westinghouse Air-Conditioning Dept. Started

### LARGE UNIT DESIGNED BY UNIVERSAL COOLER

DETROIT—Universal Cooler Corp. has just introduced a new large capacity commercial condensing unit, rated at 200.5 lbs. of ice melting effect per hour under standard ton conditions.

### 'W9XG' OF MAJESTIC TESTING TELEVISION

### General Motors Announces Faraday Gas Refrigerator

### CONVENTIONAL G. E. UNIT EMPLOYS "SCOTCH YOKE"

### G. E. ORGANIZES DEPARTMENT OF AIR CONDITIONING

### 1/2-H.P. HERMETIC UNIT IS DESIGNED BY WESTINGHOUSE

### Minneapolis-Honeywell Technicians Refine Mercury Tube Switch

### KASON HARDWARE CO. OFFERS DOOR CLOSER

### Bastian-Blessing, Russ Merger Approved

### CENTURY ANNOUNCES LINE OF CAPACITOR MOTORS

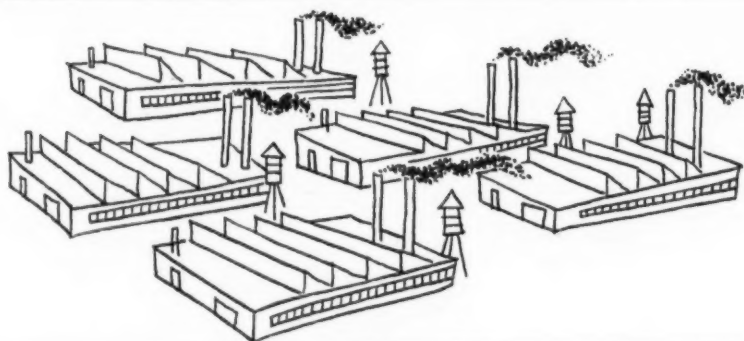
# WHY DID RANCO BECOME THE LARGEST MANUFACTURER OF REFRIGERATION CONTROLS?

*It was not easy...* Started with a small shop in 1913...



Studied the industry needs and made the technical improvements to meet them...

With the help of loyal employees gained the confidence of the refrigeration industry...



Expanded to keep pace with the needs of this growing industry  
—now five plants in America and one in Scotland

*It required* INVENTIVENESS  
PRODUCTION KNOW HOW  
QUALITY AND SERVICE



**Ranco Inc.**

COLUMBUS 1, OHIO

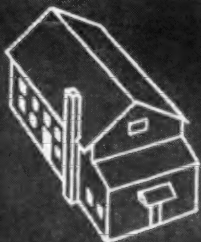


*Growing in the healthy  
fertile soil of  
free enterprise*

*Revco, Inc.*

**PRESENT PLANT FACILITIES  
80,000 SQ. FT.  
EMPLOYMENT 300,  
AND GROWING**

**FOUNDED IN 1938**



**Only 4,000 Sq. Ft. Employing only 15**

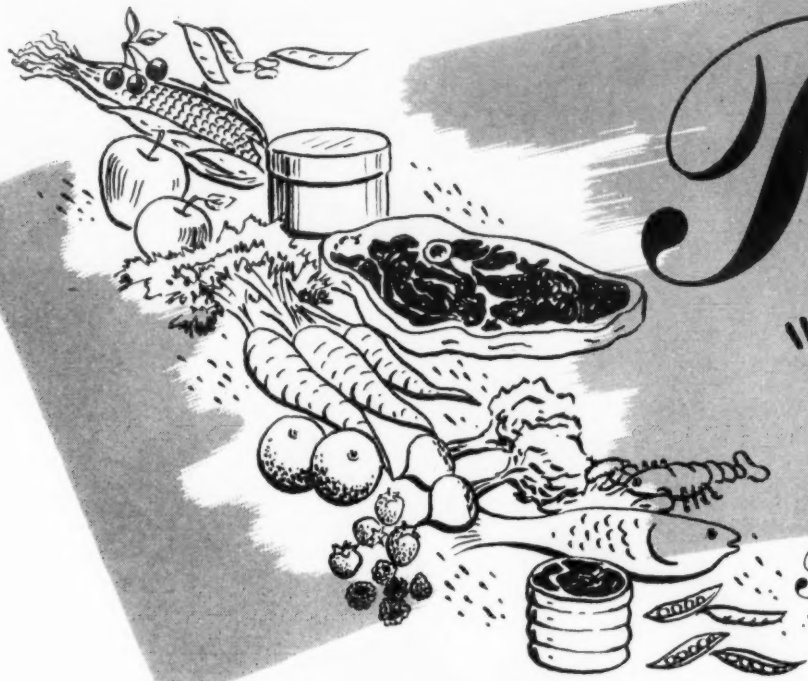
*Revco, Inc.*

**DEERFIELD, MICHIGAN**

**FINEST IN FARM AND HOME FOOD FREEZERS**

**DESIGNING • ENGINEERING • MANUFACTURING**





# Revco FOOD FREEZERS

"The Home Appliance Now Accepted as a Must"

Revco IS MEETING RISING DEMAND OF  
Mr. and Mrs. America!

FOR DEPENDABLE, ECONOMICAL,  
SMARTLY STYLED FREEZERS FOR FAST FREEZING  
AND SAFE STORAGE OF MORE FOOD AT HOME



8 CU.  
FT.



15 CU.  
FT.

**MEN** are the Measure of a company's success



GREGG F. FORSTHOEFEL  
President and Founder

Gregg Forsthoefel's leadership is a working leadership, for he is a working President. Faith, and a goal to reach—while striving daily to provide means to help men build better products, make their jobs secure—has won for him the highest respect of his fellow-workers.



HOWARD D. WHITE  
Vice President and Founder

Howard White, as a team-mate, is a perfect counterpart in industrious application to the Engineering phases at Revco. No greater compliment could be paid to any product than one guided to its completion by the masterful hand of Howard White.

#### Specialized Production

In its fifth year, devoted to mass production of highest quality Farm and Home Food Freezers, Revco has more than doubled its factory and production facilities and nearly quadrupled its manufacturing output.

#### Pioneered Trend

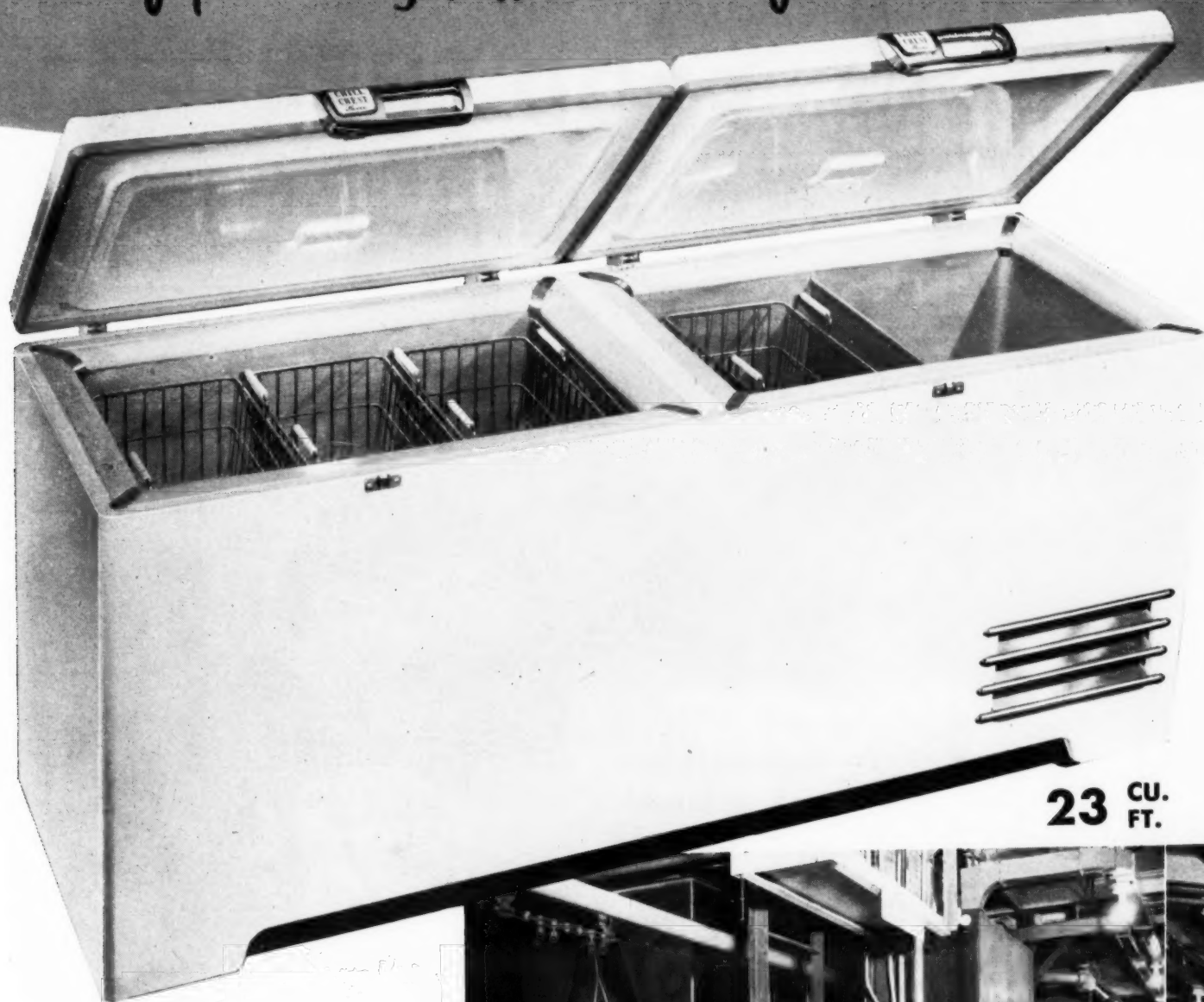
Well ahead in anticipating the trend toward increased food storage capacity in freezers, Revco's advanced engineering and designing pioneered this trend when they introduced their 8, 15, and 23 cu. ft.

Revco, Inc. OF DEERFIELD



# FREEZERS FOR THE FARM and HOME

a means of preserving a more bountiful supply of Fresh Nutritious Foods"



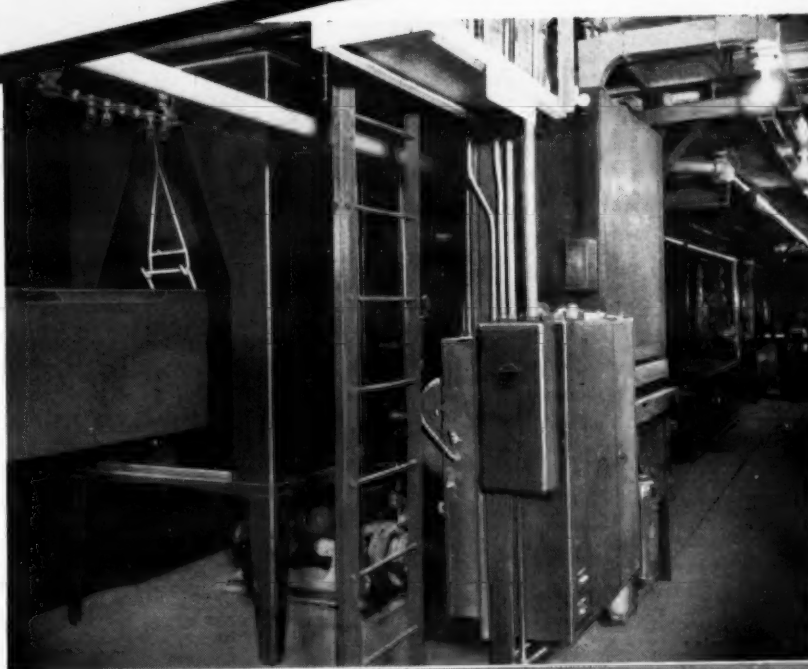
23 CU. FT.



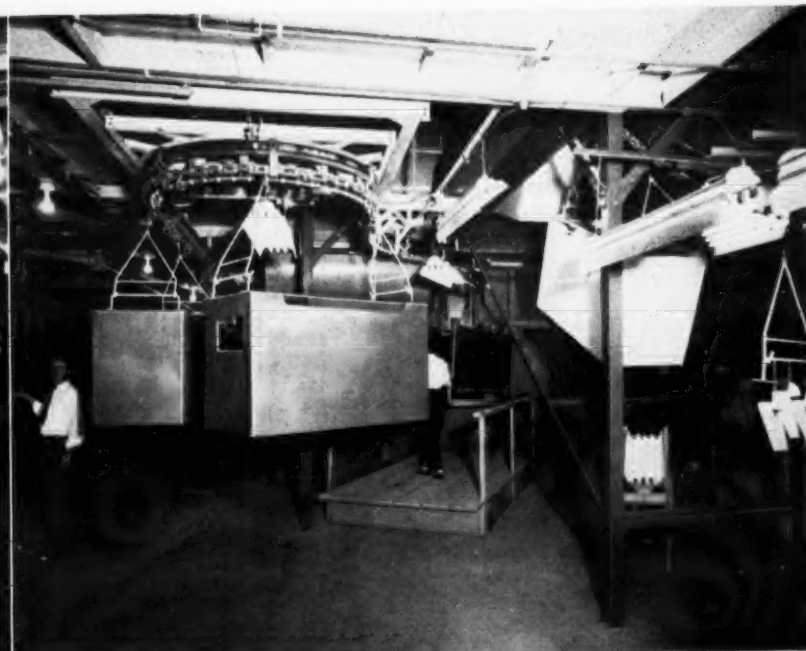
*Mass Production  
Facilities and  
Quality Control  
Insure the  
Highest Standard  
in Food Freezer  
Production*

models now in popular demand everywhere.

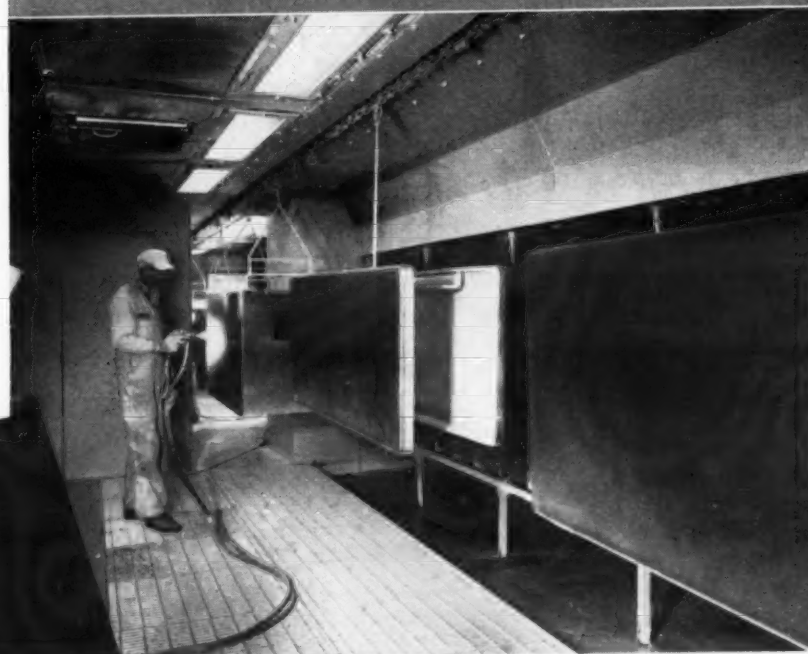
**Engineering Leadership**  
Revco is now far in advance in future plans for the type of Food Freezers that will be in popular demand by Mr. and Mrs. America.



Latest type Continuous Conveyor System for Bonderite Process, Spray Painting and Baking of Highest Quality Enamel Finish on Freezer



Shells, Lids and other parts. Every Revco Farm and Home Freezer given complete test run before shipment from factory.



DEERFIELD, MICHIGAN



Revco Helps . . .

# HUNDREDS of Distributors

and Dealers-employing many Sales and Service  
People-strengthen their business thru  
this New **FOOD FREEZER**  
**MARKET!**



**7.2% MARKET SATURATION  
WITH CONSTANTLY RISING  
DEMAND, INSURES YEARS  
OF INCREASING PROFITS . . .**

Although the farm is still recognized as the primary market for freezers, Suburban and Metropolitan Markets are showing spirited acceptance of this newer method for preserving fresh foods.

Farm freezing and storage of meats, poultry, fruits and vegetables is getting off to a fast start. This practice still in its early stages, indicates that a revolution in farm living standards is in prospect when Food Freezers come into more widespread use, at home.

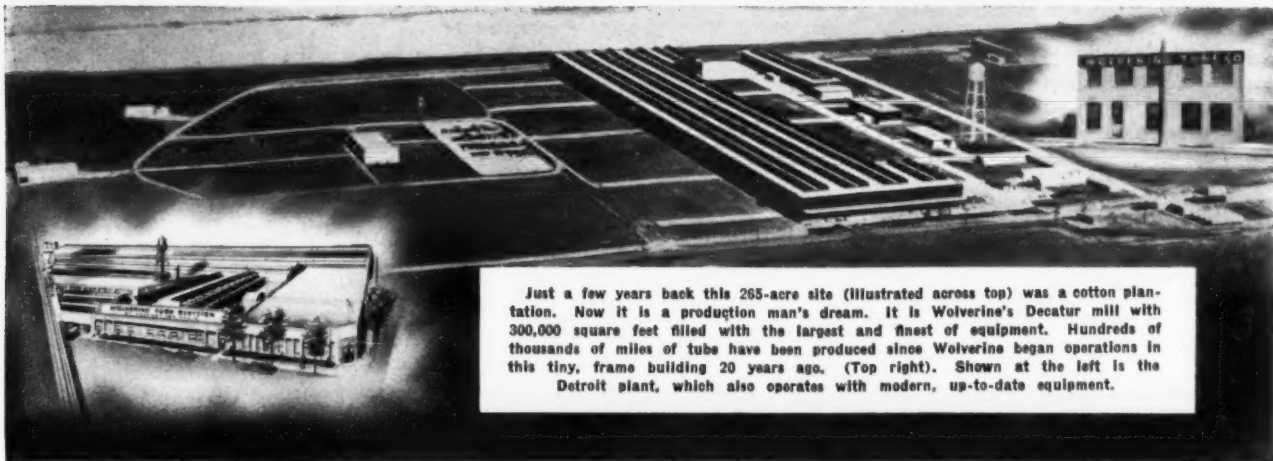
Rapid rise in Food Freezer acceptance is shown by 1946 figures of over 210,000 freezer sales jumping to 607,000 in 1947. Through 1950 Freezer sales have risen to a total volume in retail value of nearly a billion dollars accounting for 2,882,000 Farm and Home Food Freezers sold.



DEERFIELD *Revco, Inc.* MICHIGAN  
Specialists in DESIGN AND MANUFACTURE OF LOW TEMPERATURE REFRIGERATION



# Refrigeration Industry, Wolverine Tube Grow Up Together



Just a few years back this 265-acre site (illustrated across top) was a cotton plantation. Now it is a production man's dream. It is Wolverine's Decatur mill with 300,000 square feet filled with the largest and finest of equipment. Hundreds of thousands of miles of tube have been produced since Wolverine began operations in this tiny, frame building 20 years ago. (Top right). Shown at the left is the Detroit plant, which also operates with modern, up-to-date equipment.

## World's Most Modern Tube Mill

## Wolverine's New Mill in Decatur, Alabama, Adds Materially to Tube Production

The photograph above shows the great expansion of the Wolverine Tube Division, with the latest mill pictured at the top of the group. At the right is shown the original building which housed the first operations. At the left you see a view of the present Detroit mill.

Wolverine's Decatur plant is called by many "the world's most modern tube mill." On a 265-acre site, formerly the location of an old cotton plantation, stand the many buildings which comprise the plant layout. A production man's dream, the mill has 300,000 square feet fitted up with the finest and latest type of equipment.

The quarter-mile long building receives raw metal at one end and ships completed tube from the other. This building is connected by a maze of tunnels with the office, the engineering building, a laboratory, a propane plant, a power house and an electrolytic building.

The Detroit mill, though smaller, keeps up the tradition of fine equipment and top-flight manufacturing techniques.

## Latest Methods Used In Mining Copper Ore In Upper Michigan



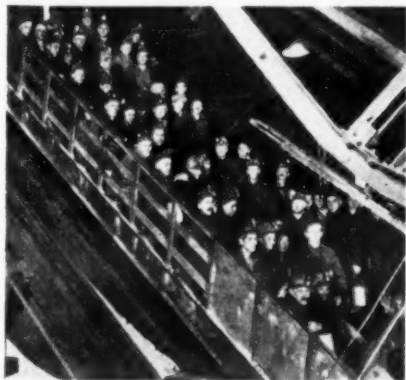
Appropriately named the Copper Country, Keeweenaw County has the twin attraction of being one of the most scenic spots in Michigan's Upper Peninsula and also the location of one of the

oldest native copper deposits.

Shafts slant deep underground where the temperature stays at 60° and the humidity at 90% all the time. Springing out from the shafts at various levels are passages called drifts and stopes. These fingers reach into rock and follow the copper lode; and through them the copper ore is brought to the surface for refining.

All mining operations are carried out with the protection of the best possible safety devices. Equipment, too, is modern.

The ore is refined and sent to the fabricating tube mills in various forms—ingots, billets, and blocks.



Hard-as-nails copper miners start off the day. As the car descends deep into the earth, crews get off for work.



Miners drill into the copper deposit before inserting their dynamite charges. Huge chunks of ore are blasted from the vein.



This mechanized shovel, run by one man, does six men's work, saves time, increases production.



Huge furnaces melt down the ore. Samples are analyzed at frequent intervals to make certain that only pure copper is cast.

## Late 1930 Boom is Enjoyed by Both Company and Industry

The refrigeration industry, which started to boom some 25 years ago, and Wolverine Tube Division have histories which have curiously paralleled each other.

Wolverine started as a redraw mill to supply the automotive industry with seamless copper tubing. Then, in the late thirties, when air conditioning and refrigeration started to come into their own, more and more Wolverine products were diverted to these fast-moving industries.

By this time, more equipment had been purchased and a building and modernization program had been completed. Wolverine expanded right along with the refrigeration industry. In 1942, the company was purchased by the Calumet and Hecla Consolidated Copper Company, Incorporated, and became a division of that company. Plants are now in Detroit, Michigan, and Decatur, Alabama—the latter called "the world's most modern tube mill."

### WOLVERINE PRODUCTS

Today, Wolverine supplies the trade with copper refrigeration tube, Trufin®—the integral finned tube, with Capilator®—the capillary tubing used for restriction purposes, with spun end products, and other seamless, non-ferrous tubing and tubular parts.

Refrigeration tube is shipped with sealed ends and has the additional advantages of being bright, clean, smooth and dry inside. It is uniform and bends easily. One of the important Wolverine advances was the introduction of individual cartons for each coil of tube. As a result, refrigeration customers know that the tube they buy will be delivered to them factory-perfect, and that the tube is dependable in performance.

Wolverine tubing and fabricated tubular parts are also used in such industries as plumbing, automotive, petroleum refining, liquid petroleum gas, ordnance, heating, and others.

\*Reg. U. S. Pat. Off.

## Quality Control is Important in Both Wolverine Mills

Quality control has been emphasized as being one of the most important phases of tube production in the two Wolverine mills. The program starts with the incoming raw mate-

rial and continues through until the finished tube is shipped.

As the metal is cast, metallurgists check each heat for the correct chemical constituents. The surfaces of the cast blocks or billets is then inspected before the metal is extruded or pierced into the base tube size.

### CAREFUL INSPECTION

These base tubes are checked again for surface quality and concentricity. As the tubes are drawn, process inspectors follow them throughout the mill. Alloy, grain size and dimensional requirements are but a few of the things that are checked. Finally, after the tube is annealed and before packing and shipping, the finished tubing is inspected.

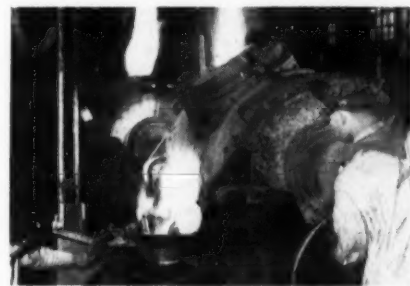
Since this quality control is practiced immediately at the beginning and completely through the fabrication operations, you can be sure that the finished seamless, non-ferrous tubing will meet the top-quality standards for which Wolverine is known.

## Men, Materials, Machines Team Up for Wolverine

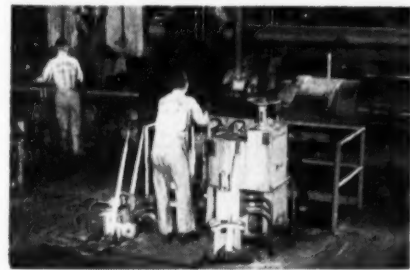
Efficient men, top-quality materials, and accurate machines are the big reason why Wolverine is a top preference in the refrigeration industry.

In the Wolverine mills, skilled men who like their jobs do the work. As a result, these craftsmen take a great deal of personal interest and pride in their trades.

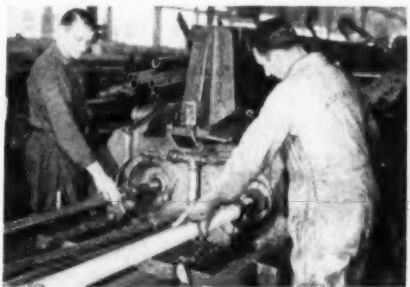
Only top-quality materials are used in tube production. Completing the team are precision machines—draw benches, pointers, furnaces, cutters, straighteners—many new processes and techniques that have been developed by the "men of Wolverine."



Raw metal is cast into billets and then sawed into extrusion blocks.



Pressure amounting to 2,400 tons extrude the blocks into base tubes.

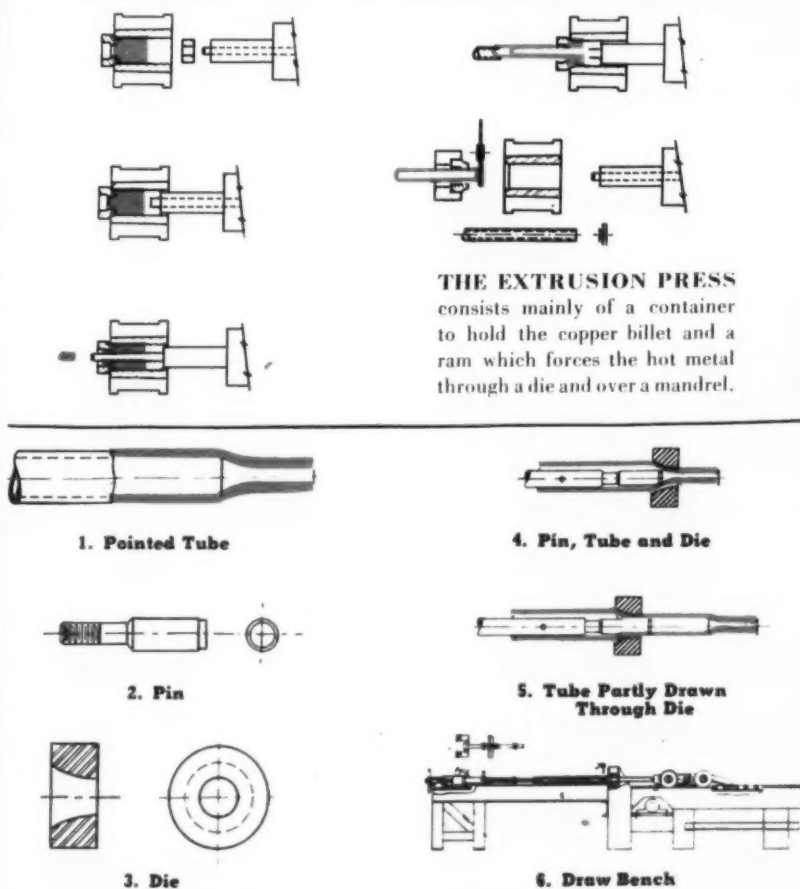


Batteries of draw benches progressively reduce the base tube to the right diameter.



Inspectors follow the fabricating operations from one end of the mill to the other.

## Extrusion and Drawing Operations





## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

(Continued from Page 1, Column 1) that town's refrigeration business? Because he knows how to put refrigerators in and how to cure their ills. His competitors have been dry goods or furniture merchants who knew little more about the refrigerators they sold than their customers, and who backed out immediately upon discovering that there was more to the machine than a plug and an extension cord.

### Rugged Men In Those Days (Feb. 25, 1931)

Henry Spencer, Norge production and service manager, is a brave man.

To the industry-at-large he is respected for his Herculean feat of converting, almost overnight, an empty Borg-Warner building into an efficient factory for the line production of Norge rollators.

Within his own organization, however, he is respected as the only man now alive who can keep a supply of R. E. Densmore's private brand of cigars in his desk without suffering asphyxiation or seeing his desk walk away.

To an ordinary mortal three puffs on one of the stogies which keep the elongated Norge sales manager in good humor are almost equivalent to poking one's jaw into a barrage of right hooks and left uppercuts administered by Jack Dempsey in his prime.

Spencer, however, apparently is immune. Even so, his men at the factory are thinking about the wording of an appropriate tablet, just in case. . . .

### Strange Bedfellows

(March 25, 1931)

On adjoining billboards in Fort Madison, Iowa, are two large posters. One reads: "Kelvinator for every home." The other asserts that no other method of refrigeration is so efficient and economical as ice. Both posters are signed by the Artesian Ice Co. of that city.

Last year officials of this company, which enjoys a monopoly on the Fort Madison ice business, decided to follow the trend of the times, and signed up for a Kelvinator franchise. That the move was wise has been proved by the almost immediate profits realized from the new line.

Artesian ice is being aggressively pushed at the same time, and so are ice refrigerators. Believe it or not.

### Early Air Conditioning

(April 8, 1931)

Air-conditioning apparatus of some form or another has been employed by cigar plants for many years, although the particular application made by the General Cigar Co. for preserving Dutch Masters cigars is unique in the field. A 100-ton capacity

Carrier refrigeration unit has been in use in the Bayuk factory in Philadelphia for five years.

Incidentally, F. M. Cockrell, publisher of *ELECTRIC REFRIGERATION NEWS*, has discovered that cigars can be kept in good condition in a household electric refrigerator almost indefinitely.

Not using cigars himself (but you should see how he consumes Old Golds!) he keeps them on hand for his guests. The Valve has smoked one of these home-refrigerated cigars which arrived at the Cockrell home on Christmas, 1928, and pronounced it good.

So, too, has the erudite Fred Brack, advertising manager of *ELECTRIC REFRIGERATION NEWS*, and a man of discerning taste.

### Tough Guys

(April 22, 1931)

Add to the list of electric refrigeration sales managers who are built on the football player scale H. C. Jamerson, of Frigidaire.

Already we have mentioned the size and aggressive bearing of Sam Vining of Servel, H. I. Burritt of Kelvinator, Mike Mahoney of General Electric, and L. G. Lindsay of Trupar. Jamerson should have the full rights, privileges, and benefits accruing to these accredited members of the Ima Strong Guy fraternity.

In the production department of *ELECTRIC REFRIGERATION NEWS* we keep standing a 24-pt. head which we dig up and run every year. The head reads:

GEORGIA POWER CO.  
GOES OVER THE TOP  
IN SALES CAMPAIGN

They never fail us out in Atlanta, and the head is almost as much an institution around the NEWS office as "STAGG FEARS PURDUE" has been on sports pages for the last two decades.

The man who has been largely responsible for the success of the Georgia Power Co., as a merchandiser of electric refrigeration, is H. A. Pendergraph, another big, powerful fellow.

After a chunk of an afternoon spent in Pendergraph's office, the Valve was unable to dig up any Magic Formula, any Open Sesame, which Pendergraph owns. All his company does (he claims) is set up a big quota, play fair, and go out and sell a lot of refrigerators. In other words, the way to sell is to go out and sell.

### Engineers & Inventions

(May 20, 1931)

Warmly friendly and human, Glenn Muffy is perhaps as well liked as any engineer in the refrigeration industry. His low chuckle, his lively interest in people and ideas, and his omnipresent midget cigar ("Admiral-

tion" is the brand—this is not a paid adv.) are known and welcomed wherever he goes. The personal popularity of Copeland's senior engineer is matched by the respect accorded his engineering knowledge.

Mr. Muffy has a definition of the term, "invention," that deserves a place alongside the immortal elucidations of "news" and "phenomenon."

He states it something like this: Supposing the problem were to seat 12 persons in a room which contains only six chairs. If the problem is solved by bringing in another half dozen chairs, that isn't invention—it is simply a new arrangement.

But if one could figure out a means of placing two persons in each chair without crowding, that would be an invention.

Tall, dark, quick-moving, A. W. Oakley engineer for the Merchants Refrigerating Co. of New York City, is a commanding figure standing in front of an assemblage. He has a resonant voice and a confident manner, in combination with a steady flow of language and nimble comprehension of the situations in which he is placed.

Off the rostrum he is smiling, amiable, and understanding. Engineering is his profession, but should he ever choose to desert it, he has the native equipment requisite for a public personage.

### The Leaders Are Human

(June 3, 1931)

Scene: Essex Country Club, near Windsor, Canada. Time: 7 to god-knows-what o'clock. Dramatis personae: E. G. Blechler, president of Frigidaire; George Mason, president

of Kelvinator; Louis Ruthenburg, president of Copeland; P. B. Zimmerman, manager of the General Electric refrigeration department; G. R. Johnson, president of Universal Cooler; R. T. Frazier, Tennessee Furniture Corp.; J. A. Harlan, Frigidaire vice president in charge of sales; H. I. Burritt, Kelvinator vice president in charge of sales; Mike Sweeney, G.E. production manager; Walter Landmesser, G.E. commercial manager; and others.

Gathered together under this cozy roof were a prize group of what George Bright would call: "Barons of the Industry." Out in the field the organizations they headed have been fighting bitterly, contesting every inch of ground their competitors gain.

Here were the men at the top of the heap. Men who are under tremendous pressure, who are pouring creative energy into a rising new industry. Men who travel the second mile, who add the extra ounce, every day. Men who are striving among one another for mastery.

Yet these men can play. And all are accomplished goodfellows. One saw Blechler and Zimmerman walking arm-in-arm down a corridor, talking seriously but exchanging smiles often. In a locker room were Mason and Ruthenburg, conversing happily like old comrades meeting for the first time in a decade.

At dinner all four of these men sat together at one end of a table. Between courses they played a good old American game, and played it with all the enthusiasm and boisterous spirits of schoolboys. They called one another "Ruth," "Biech," "Zim," and "George."

A great time they had together, and the backslapping, choruses of

guffaws, and good cheer seemed as genuine as it was spontaneous. Following a day of arguments and attempts to harmonize diverse ways of thinking, these men were big enough to forget their differences, and enjoy a companionable evening.

Tactics of uncontrolled salesmen occasionally lead observers to think that no-holds-barred competition and rivalry in this industry match its aggressiveness. This may be true. After seeing a get-together of a group such as that at the Essex Country Club, however, one is pretty well convinced that hijackery methods are not inspired nor approved by the Men at the Top. These gentlemen seem to like and respect one another, and show it.

A thoroughgoing student, a relentless seeker after facts, an executive whose business judgment seems to be respected everywhere, a coiner of meaty phrases, and well-lettered man of affairs, Louis Ruthenburg can also play—when occasion for relaxation arrives.

He has quick comebacks for jests and is something of a jester himself. And his smooth, accomplished manner of playing and being a good-fellow signify that all his experience hasn't been gained in factory and office.

This little attempt to demonstrate that important executives of the refrigeration industry can be just as human and fun-loving as the most capricious of salesmen needs no better example than that afforded by President Mason of Kelvinator at the party of which we have been writing.

His friends called him "George," and he responded in kind. If the cue was to talk about business, Mr. Mason

(Continued on next page)

# How "FREON" paved the way

## IN AIR CONDITIONING

**EARLY DAYS.** Back in the days when the publishers of "Air Conditioning & Refrigeration News" embarked upon the job of recording the rapid progress of this new and promising industry, most air conditioning and refrigeration equipment manufacturers already recognized the urgent need for better, more dependable, and—above all—safer refrigerants.

Electric refrigerators were then new . . . novel . . . and most welcome. They had been on the market only since the early 1920's, but their popularity proved encouraging and demand for the new devices grew quickly and steadily. Although installations of air conditioning systems were fewer in number, it soon became evident that conditioned air—comfort cooling—also had a bright future outlook.

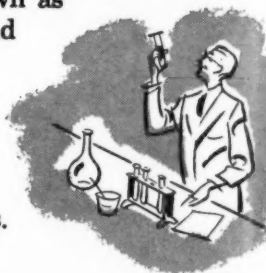
**NEEDED: AN IDEAL REFRIGERANT.** The only refrigerants available at the time, however, did not allow much improvement of the machines then in use. Manufacturers realized full well that certain refinements would enhance the service, usefulness and value of their equipment . . . and, in addition, further stimulate its sale.

"Give us a safer refrigerant . . . one of nonflammable, non-explosive qualities . . . of low order toxicity, anhydrous or of extremely low moisture content, chemically pure and thoroughly dependable." That was their order of the day!

**PRODUCT OF RESEARCH.** So it was that in July of the year 1928, Dr. Thomas Midgley, Jr., and a learned group of chemists, physicists and toxicologists

began active research toward developing a better refrigerant demanded by the growing industry.

It was not long thereafter that the group discovered the effectiveness of two compounds: monofluorodichloromethane ("Freon-11") and dichlorodifluoromethane ("Freon-12"). Known as halogenated hydrocarbons, and having one or more fluorine atoms, these compounds were found to possess all the desired properties required to produce greatly improved refrigerants.



**"FREON" SPURRED INDUSTRY.** The advent in 1931 of "Freon" safe refrigerants produced in commercial quantities—an intricate, highly technical operation—proved an enormous stimulant to the entire industry. These refrigerants encouraged . . . and indeed made possible . . . the development of all types of air conditioning and refrigeration equipment . . . both small and large units. It speeded up various applications to meet countless commercial, industrial and household needs. The industry raised its sights and, as the record shows, moved quickly on and on to levels far in excess of the dreams and hopes of the early advocates of air conditioning and refrigeration.

"Freon" refrigerants readily enabled equipment manufacturers to improve their machines . . . make them more compact, safer, more dependable, more economical to operate. The sensational dryness of "Freon" refrigerants reduced risk of freezing capillary tubes and other parts of delicate mechanisms. Manufacturers could vouch for the safety of their equipment and assure the user that satisfactory



## Ben-Hur Dealer\* Sells 14 Freezers in 2 Days with this Freez-R-Pak Combination Offer!

\*Radio Center, New Orleans

Ben-Hur 13.1 Cubic Foot Freezer. Others: 8.5, 16, 20 cubic foot sizes.

Ben-Hur "FREEZ-R-PAK" Get-Started Kit — \$39.25 Value offered with each Freezer Sold



This \$39.25 FREEZ-R-PAK "Get-Started" Kit is the year's greatest sales-builder in freezers! Contains a full season's supply of nationally advertised packaging supplies and equipment—enough for hundreds of pounds of foods. Saves your freezer customer on initial food freezing investment—and shows him how easily food can

be packaged and frozen at home—for lower food costs. It's typical of the powerful merchandising help that BEN-HUR dealers enjoy—for freezer sales-leadership and profit. Ask your Ben-Hur Distributor for all details—and the feature-by-feature story on BEN-HUR Farm and Home Freezers that make it your fastest selling line today.

BEN-HUR MFG. CO., Dept. AC, 634 East Keefe Avenue, Milwaukee 12, Wisconsin.

**BEN-HUR FARM and HOME FREEZERS**  
HEALTHFUL LIVING THROUGH FROZEN FOODS



## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

(Continued from preceding page)

was ready, and commanded attention with his comments. If stories were the order of the hour, he was prepared with some new ones. If indoor sports were being played, he demonstrated professional prowess.

"Mike" Sweeney matches the group of All-American guards (Mason, Ruthenburg, Biechler, Johnston, Col. Smith) mentioned previously, in bulk and squareness. His face denotes strong will; his bearing is aggressive; he talks slowly, carefully, weighing his words, evincing well-grounded knowledge of the subjects upon which he offers information or opinion.

Walter Landmesser belongs to the "medium size" category, has wavy dark hair, eyes which dart and flash, a determined mouth, and a running spring of nervous energy. He, too, knows whereof he speaks.

Typifying the driving and staying powers of the G.E. Cleveland force is Walter J. Daily, sales promotion manager. Like others there, Daily is young, tremendously alert, and a fast worker. He makes an excellent news source, for he recognizes news when he sees it, knows where to find it and how to get it, has good "grapevine" intelligence system and is thus able to anticipate news, and does everything he can to make it easy for the reporter to get any story he wants.

While the number of Frigidaire vice presidents can't begin to compare

with the regiment belonging to the Guaranty Trust Co., there are enough of them that E. B. Newill can be introduced by co-workers as "one of the younger of our vice presidents." He is in charge of engineering.

He does seem young for a vice president, and yet he carries about with him a quiet air of authority and a pleasant confidence, both of which inspire trust. Like many another engineer in this industry, he is "middle-sized," has wavy dark hair, a firm mouth, and penetrating eyes.

Presidents and sales managers, one finds, are often husky, aggressive, and outspoken. Engineers are likely to be slight, retiring, and taciturn.

### Speed, Thrills, Growth

(July 29, 1931)

As announced in this issue, ELECTRIC REFRIGERATION NEWS will become a weekly newspaper in September. That announcement, gentlemen, gives the editorial department of this yere sheet a genuine thrill.

We are all news-minded around this place, and nothing pleases us more than the knowledge that we have been the first to bear the glad tidings from Ghent to Aix.

Smoothed-out production schedules will aid us, we think, in cutting down the time between the making of the NEWS and its arrival in the subscribers' hands. All of which, of course, improves the paper's service.

### Leaf from the Diary Of An Editor

(May 11, 1932)

Up late, as usual. Swiftly dressed and to the office to find that Paul Jones, Servel's popular advertising and sales promotion manager, had called from a downtown hotel. Other calls from Ray Cosgrove of Westinghouse, Ralph Douglass of Copeland, and George Cullen of Kelvinator.

Delving into the morning's mail—always interesting—we turn up a number of queries like: "Of the 24 refrigeration manufacturers which have gone out of business in the last two years, how many used rollator compressors?" None, old timer, 'cause "Rollator" is the trade name of the Norge and no other.

From John Knapp, Norge vice president in charge of sales, came the new Norge sales manual, with my name neatly stamped in silver on the cover. From Ben Ritter, G.E. regional representative out in Denver, Colo., comes an interesting travelogue-letter. Also some fan mail on "An Editor on Wheels," and one of Colin Jameson's bright epistles.

A pile of copy, a stack of pictures, assignments, and the usual run of conferences and callers. Then comes, in the middle of the afternoon, an applicant for a secretarial job, newly out of Vassar and bearing a high-toned Detroit address. And, somehow, being a raw country feller who has never even learned how to play bridge, it tickled our vanity to think we could dictate letters and assign little tasks to a Daisy-Chainer, so we hired her.

Another phone call from Paul Jones, who had reappeared from nothingness, and we dashed down

to find him in a hotel room tidying up a bit with R. C. Cosgrove, Westinghouse sales development and sales educational manager. Both had to catch 4:30 trains—Cosgrove for New York, and Jones for Chicago—so after a little chinning session we elevated down to the lobby. And there, checking out, was John Ditzell, Majestic general sales manager.

He, too, was catching the 4:30 train for Chicago. We bundled Jones and Ditzell into the rumble seat of what Bill Myers of Trupar calls our "platinum blonde" Auburn, stuck Cosgrove and the bags in the front seat, and zoomed off for the two stations.

P.S. They made their trains. The windblown Jones and Ditzell declared the ride through traffic had made them years younger. At least it was a demonstration of how to keep from growing old.

Back to the office to find an invitation from Myers of Mayflower to meet him at the Book Cadillac for dinner. Picking up Engineering Editor Jack Schaefer, we coasted down to the Book again, found Jim Nance (supercharged Frigidaire sales promotion manager) who also happened to be at the Book, and hid ourselves to the Seafood Grotto. From this point on we didn't keep notes. . . .

### Statistical Hounds

(Oct. 19, 1932)

If a son of mine should ever want to be an advertising man, I'd see to it that he studied mathematics from the cradle straight through to his first disappointment in love.

He'd begin right off with the multiplication table; at the tender age of eight he should be able to do nine-place long division in his head; algebra and the various geometries should come before his first long pants; fundamental and differential calculus by the time he begins to inspect seriously the down on his lip; and when he should be ready for the polls, I'd want him to be deep into the quantum theory, fourth dimension, relativity, and celestial mechanics.

Why? Because the most important thing in life to most advertisers seems to be statistics.

Before I knew better it used to be my notion that an advertising man was a literary genius who could also sell. Nowadays I'm more inclined to believe that this strange creature is one who spends his time juggling the 1929 Census of Distribution, dividing and subdividing the population according to income groups, arriving at a buying power index by multiplying the money in circulation in Appleton, Wis., on the night of June 13 by the cube root of the distance from Pier 14 to the mysterious retreat in the Universal Cooler factory where "Jeff" Johnson hides out when you call on him, and laying objects end-to-end to see how far they will reach.

Along about this time of year advertising agencies begin to make us here at the Business News Publishing Co. wish we had gone in for portrait painting, or steeple-jacking, or some nice, quiet trade in which one wasn't called upon to give statistical breakdowns of all the unavailable information on an industry.

A toothache or a colicked baby aren't in the same class with an advertising agency questionnaire as a sleep-robber.

In spite of the fact that theater cooling is not new, playhouses have been capitalizing to the limit this year on their air-conditioning systems.

Recently we saw two amusing juxtapositions of movie titles and the "cooled by refrigeration" slogan in the lighted letters which adorn movie sidewalk canopies. They were:

MERRILY WE GO TO HELL  
COOLED BY REFRIGERATION

and  
EMIL JANNINGS IN PASSION  
COOLED BY REFRIGERATION

### Presenting Howard Mateer

(Dec. 21, 1932)

For the last month we've been having a lot of fun. Occasion for said fun has been the arrival of Howard W. Mateer ("Mat" to us) who has undertaken the direction of advertising for the Business News Publishing Co.

"Mat" is a reg'lar fellow. He has brought new life and color and dash to the offices of ELECTRIC REFRIGERATION NEWS, Refrigerated Food News, the Refrigeration Directory, et al.

University of Illinois awarded him a degree in electrical engineering in 1916, following which he spent one and a half years in the technical publicity department of the National Lamp Works of the General Electric Co. in Cleveland. P. B. Zimmerman, now manager of the G.E. refrigeration department, was one of his associates there.

From Cleveland, "Mat" went to the Chicago office of McGraw-Hill; and not long afterward he was called to the New York office where, in a short time, he was placed in charge of the copy service department for the McGraw-Hill electrical papers. One of his immediate superiors was Howard Lewis, now vice president and treasurer of Kelvinator Corp.

His rise from that point was rapid. He is our SERVICE MAN and has been brought into our fold to enlarge the service-to-advertisers of the world's best trade paper.

We shan't emulate Ben Bernie and say, "We hope you like him." We KNOW you will!

### Willis Carrier

(April 26, 1933)

Here are a few observations about Willis Carrier, the man:

When his mind gets a strangle hold on a problem, whether business, thermodynamics, or teaching tricks to a houn' dog, he is alone—as much alone as in a subway jam or a football crowd as in the wilds of northern Ontario. At these times the routine details of life don't interest him. He must be reminded to eat, to sleep, to keep engagements, to put on his overcoat.

And here is how Mr. Carrier describes his outlook on life:

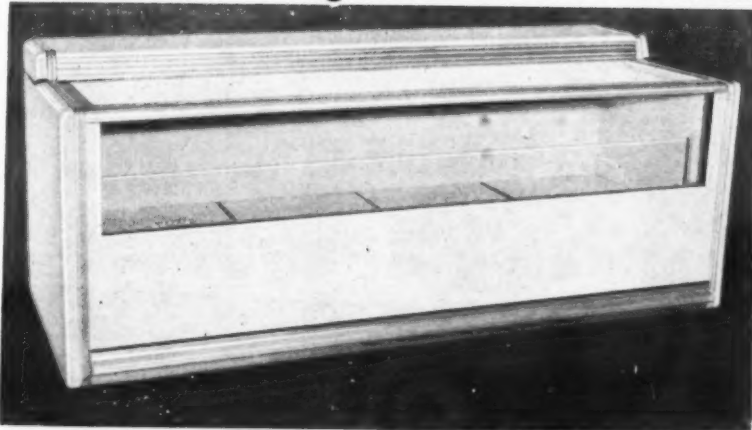
"I've never bothered much about planning my career far in advance. For one thing, I'm too lazy. For another, if you worry too much about the future, you bungle the present.

"I'm afraid I'm not much of a go-getter, either. If you're always chasing opportunities, you're too tired to take advantage of them when you catch up with 'em."

What interests him most about air conditioning at the moment is its possibilities as an aid to health.

More 'Dope' will be found on pages 70 and 72

### Warren Makes Big Stride In New Freezer



ATLANTA, Ga.—After many months of extensive laboratory and field testing, The Warren Company announces a new 8-ft. frozen-food display case, Model LO-8. Even fruits and juices with high sugar content are kept firm and in finest quality by the sub-zero tempera-

tures of the LO-8. Its capacity of 612 packages is, indeed, exceptional, and practically this entire display is visible through the extra-wide four-glass Thermopane display front.

For further information, write to THE WARREN COMPANY, Inc., P.O. Box 1436, Atlanta 1, Georgia.

# the way of progress

## AND REFRIGERATION

performance of the system would extend over long periods of time.

**CONTINUED PROGRESS.** The industry has come a long way in these twenty-five years. It has grown from a mere babe to an industrial giant whose influence is now felt throughout the world. It would be difficult—if not impossible—to list the hundreds of ways in which modern air conditioning and refrigeration now serve the everyday needs of mankind. There is scarcely a business or industry which does not benefit directly or indirectly from the fruits of this engineering achievement . . . and the benefits are steadily expanding.

Today, by far the majority of domestic, commercial and industrial refrigeration and air conditioning systems of every size are operated with "Freon" refrigerants. The reasons are sound. "Freon" refrigerants are safe. They are nonflammable, nonexplosive, virtually nontoxic, sensationally dry, chemically pure and their quality

is as uniform as modern scientific, laboratory-controlled methods of manufacture can produce. In addition, they have the thermodynamic and physical properties to meet the needs of all types of equipment.

Today, opportunities abound on every hand. Air conditioning and refrigeration are accepted developments in this mid-century world of wonders. And the field is wide open. It requires only the continued initiative of those closely associated with the industry to carry on the upward trend.

Today there is a "Freon" safe refrigerant suitable for every air conditioning and refrigeration need. And because these dependable refrigerants are so widely known and used . . . thousands of engineers unhesitatingly recommend installation of equipment charged with "Freon" refrigerants. You can do the same . . . and always with full confidence that "Freon" refrigerants will prove a beneficial investment for all concerned. And keep in mind, "Freon" refrigerants meet all building code requirements. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

REFRIGERATORS-AIR CONDITIONING

NEW MODELS



Listen to  
"Cavalcade of America"  
Tuesday evenings—NBC



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



### "FREON" SAFE REFRIGERANTS

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon refrigerants





### CROSLEY DESIGNS DOOR WITH FOOD SHELVES

CINCINNATI—Two innovations—a door within which food may be stored, and the quoting of delivered (freight and everything else paid) prices—are the levers with which the Crosley Radio Corp. hopes to pry open a larger share of the electric refrigeration market in 1933. Three models will comprise the entire line: 3½ cu. ft., priced at \$95; 4½ cu. ft., \$105; and 6 cu. ft., \$130.

These distributors had sat dispassionately through a morning devoted to the unveiling of the 1933 Crosley radio line, but when Powel Crosley, Jr. smilingly opened the door of a 3½-cu. ft. job, and they saw the Shelvador arrangement, they jumped upon their chairs and shouted their approval.

"Automatic defrosting of refrigerators is a problem that has been tackled several ways through the years."

### NEW DEFROSTING DEVICE SOLD BY BOND ELECTRIC

CHICAGO—A new device for automatically defrosting an electric refrigerator once every 24 hours is being manufactured by the Waterbury Clock Co., Waterbury, Conn., for Bond Electric Corp. The "Frost-off," as it is called, a time-clock method for defrosting systems, will be distributed through refrigeration dealers and distributors.

"The industry was prepared nearly 20 years ago to provide comfortable, clean, cool air for residences."

### YORK PRODUCES AIR CONDITIONER UNITS FOR HOME

YORK, Pa.—York Ice Machinery Corp. has started production on an individual air conditioning unit and a central system air conditioner for household applications and for use in stores, restaurants, and other places of business, according to William S. Shipley, president.

The new York unit air conditioners are being produced in both floor-type and ceiling-type models. Floor-type models have attractive finishes with grilled tops.

"Fond memories will be recalled to thousands in the industry and NEWS staffers by this item."

### Future Home of The News

DETROIT—Business News Publishing Co. will soon move to a handsome home of its own located at 5229 Cass Ave., a short distance from the Maccabees building where the company has been for 7 years.



"Recognizing the ever-changing aspects of the youthful refrigeration industry, the NEWS compiled a list of independent service firms that ran to the amazing total of over 900. Their rapid growth was indeed remarkable."

### Independent Service

Important but unheralded has been the rise of independent service companies all over the nation during the last couple of years. On pages 10, 11, 12, 13, and 14 of this issue is printed a list of more than 900 such concerns. This list is at least three times larger than any previous available list and indicates a remarkable growth of this type of organization during the last year.

Independent service companies have sprung up and become well established in spite of the opposition of the larger manufacturers. Manufacturers such as Frigidaire and Kelvinator have permanent national service organizations which they feel should be able to handle all service requirements on their own particular installations.

Mortality among distributors (leaving whole service departments unemployed), plus the steady influx of new graduates of service schools, has given the industry an oversupply of trained servicemen. The most enterprising of these have set up in business for themselves.

Another group of related independent concerns is just now coming into being—refrigeration supply houses. A notable example is Refrigeration Products, Ltd. of Los Angeles, a jobbing house operating over the entire Pacific Coast territory, and representing manufacturers such as Fedders, Detroit Lubricator, Kulair, Automatic reclosing Circuit Breaker, and others.



"Remember the bank holiday and the dark days of March, 1933?"

### Telegram

Cincinnati, Ohio  
March 7, 1933

Electric Refrigeration News:  
Following dayletter sent distributors quote: After reading President's proclamation we are completely reassured as to future. We are continuing manufacture and make shipments of Crosley merchandise with firm conviction that it is only matter of a few days until perfected banking arrangements will be in effect. Look forward to complete restoration of confidence sadly lacking for past three years with its tremendous stimulation to business. Glad establish even more liberal line of credit to our distributors including shipment refrigerators for time being 30 days trade acceptance to accounts maintaining reasonably satisfactory credit relations. Urge you maintain good stock. Telegraph orders so we may anticipate material purchases.

POWEL CROSLEY, JR.

"This development had the industry wondering what would happen to the productive art of cold canvassing, for example."

### Commission Salesmen Must Receive Minimum Wages

NRA Bulletin Interprets Retail Code For Salesmen

WASHINGTON, D. C.—Salesmen paid on a commission basis—whether inside or outside salesmen—must receive not less than the minimum weekly wage rate prescribed in the code of fair competition for the retail trade, according to an official interpretation of the retail code made last week by the National Recovery Administration. The minimum scale under the code ranges from \$15 to \$10 a week.



"Cash was temporarily unavailable, so..."

### MORATORIUM CALLED ON TIME PAYMENTS

DETROIT—Refrigeration Discount Corp., which finances the time payment paper of Kelvinator Co., has recognized the exigencies of the national banking holiday by giving all its customers the option of extending their March payments to the end of their contracts without charge.

"Dominating industry and national news was the Blue Eagle ('We Do Our Part'), later bested by a mere chicken, as we recall."

### BLUE EAGLE NEWS



"Highly competitive manufacturers of refrigerators joined forces wholeheartedly in mapping plans for its first trade code."

### CONFERENCE ACCEPTS NEMA LEADERSHIP ELECTRICAL INDUSTRIES TO HAVE BROAD CODE WITH SUB-CODES FOR PRODUCT DIVISIONS

By Phil B. Redeker

DETROIT—With the feeling predominant that manufacturers of electric refrigerators who are not members of the Refrigeration Division of the National Electrical Manufacturers Association should and will join Nema to work under and with that association in formulating a trade code in conformity with the provisions of the National Industrial Recovery Act, some 75 representatives of manufacturers of electric refrigerators, parts, materials, and supplies adjourned a one-day meeting held here July 6 apparently satisfied that the proper initial steps had been taken towards the course of action required by the law.



"Many times in its 25-year history the NEWS has played host to industry-wide meetings, such as this one held to map out a program under the now almost-forgotten NIRA."

### INDUSTRY CONFERENCE IN DETROIT JULY 6

### News Will Be Host to Industry Executives At Dinner Party

DETROIT—G. M. Johnston, chairman of the Refrigeration Division of National Electrical Manufacturers Association (Nema), has announced Thursday, July 6 as the date, and the Maccabees building, Detroit as the place of the all-industry conference for consideration of methods of cooperation under the terms of the National Industrial Recovery Act recently passed by Congress.

The Nema Refrigeration Division has accepted the offer of ELECTRIC REFRIGERATION NEWS to provide facilities for the conference and to be host at dinner for the entire group.

## We took 44 Giant Steps

FORTY-FOUR YEARS of continued progress and success is a record of which we're mighty proud . . . and humble, too.

From that beginning forty-four years ago, in a small factory where we manufactured automobile radiators, we have grown steadily and rapidly until today, in one of the newest and most modern plants in the country, we produce refrigeration and air conditioning equipment which is among the finest in the world.

And for all this the friendly spirit and able cooperation of such publications as *Air Conditioning & Refrigeration News* has been a generously contributing factor. Best wishes for its continued success.

BUSH MANUFACTURING CO.  
WEST HARTFORD 14, CONN.

**BUSH**  
HEAT TRANSFER PRODUCTS

### YOUR BEST INSURANCE AGAINST EXPLOSION DANGER!

### FINE "SEAMLESS" CYLINDERS

give maximum safety for only 3 cents a year! Cheapest insurance you can buy against explosion danger from cylinder overfilling! Their extra capacity . . . 4.8 lbs. compared to 4.0 ICC requirements . . . decreases high pressure due to hydrostatic expansion. Heavier metal walls, thicker at ends. No welded seams. Fusible safety provided as standard equipment. Spring loaded safety, slightly extra.

... Ask your Wholesaler about Fine's new 5 lb. cylinder No. 5E, stands erect!

**Fine PRODUCTS CO.** 4837 S. WESTERN BLVD.  
CHICAGO 9, ILLINOIS







Beer came back in 1933, much to the delight of the commercial refrigeration industry which welcomed a new field for its products. The slow moving process of repeal gave the manufacturers time to get ready to meet the expected rush of demand. But they were still overwhelmed by the response from the "beer garden" trade. This happy bar keep poses beside one of the early types of a mechanically refrigerated beer dispensing box with a mug of 3.2.



"As the nation approached the end of its 'noble experiment', the populace was happy to learn that..."

## REFRIGERATION MANUFACTURERS ARE READY FOR BEER

**FEDDERS ANNOUNCES COOLERS, DISPENSERS**  
**ESCO OFFERS NEW MODEL BOTTLED BEER COOLER**  
**TEMPRITE BUILDS 100 BEER COOLERS DAILY**  
**YORK RECEIVES ORDERS FOR BREWERY EQUIPMENT**

"This one's on the house."

### SPECIFICATIONS

**Of Draft and Bottle Beer Coolers**  
 Specifications of 47 makes of draft-beer dispensing equipment and 15 makes of bottle-beer coolers are printed in the succeeding pages.



"As the keg was tapped so was a tremendous new market for air conditioning."

### Beer Expected To Help Sales of Conditioners

**PITTSBURGH**—The return of beer should aid the sales of air conditioners, 1,200 members of a dozen local engineering and professional organizations were told recently by Charles D. Graham, air conditioning engineer of the Westinghouse Electric & Mfg. Co.

"Now that beer has been legalized," said Mr. Graham, "the nation is facing a period of intensified social activity. Many parties will be held during the coming summer in homes, restaurants, and rathskellers, with guests drawn by the magic of this beverage."

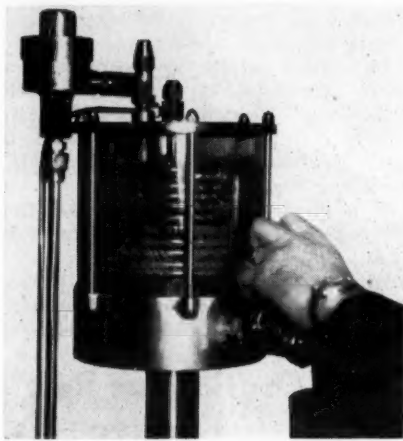
"Wherever people gather in large groups they will be more comfortable if the surrounding air is artificially reconditioned to the proper temperature, humidity, and cleanliness, and is recirculated in proper quantity."

"Another development that marked 1933 was the introduction of the self-contained air conditioner. Carrier brought out one of the first."

### NEW CARRIER COOLER IS SELF-CONTAINED

**NEWARK**—With a Carrier refrigerating machine installed in the lower portion, a new self-contained room cooler has just been announced by Carrier Engineering Corp. of this city.

Known as the "Room Weather-maker," the new product is designed to be placed against the inside walls of a room to be cooled, or if desired, it may be recessed in the wall or enclosed in a closet with suitable inlet and outlet openings for the air. It has approximately 1 ton of refrigerating capacity.



New types of beer cooling and beer dispensing equipment of advanced design hit the market with a rush. Typical is this chilling unit introduced by Temprite Products.

"Enterprising promotion and publicity stunts focused the public's eye on refrigerators. One of the most ambitious was the '42nd Street Special' train sponsored by General Electric and Warner Bros. which attracted thousands from coast to coast."

### MOVIE STARS HELP DRAW CROWDS TO G. E. MEETINGS

**CHICAGO**—Tens of thousands of Chicagoans swarmed around the elaborate showroom of R. Cooper, Jr., G. E. distributor here, Tuesday noon when the junketing Warner Bros. film stars broadcast greetings to the city from the floor of the palatial establishment. Traffic was blocked in two streets by the milling multitude.

The gold-and-silver-leafed "42nd Street Special" train pulled into Chicago's Union Station at 11 o'clock Tuesday morning on its transcontinental tour, and the stars appeared on the observation car platform to wave and smile at the crowd gathered there before being motored to the Cooper showroom.

Joe E. Brown acted as master of ceremonies and introduced Bette Davis, Laura LaPlante, Doris MacMahon, Shirley Ross, Leo Carillo, Christian Foster, and others.



"More fuel was added to the fire for an association of the refrigeration industry."

## Reviving An Idea

Action of the National Electrical Manufacturers Association in rejecting the bid of the suppliers of parts, materials, and accessories to the refrigeration industry for membership in Nema as a division has reopened the question of uniting the entire refrigerating industry in an association of its own.

For some years, this question has been raised periodically. Some observers accepted it as an eventuality, a development which would undoubtedly take place when the industry had attained sufficient stature and hegemony to justify the existence of an all-embracing industry association.

At their Detroit meeting last week a definite renewal of sentiment for an all-industry refrigeration association was expressed. Nema, it was felt, had crossed the Rubicon. Of its own choosing it had cast the die against absorbing the refrigeration industry. And the manufacturers thus cut loose have begun thinking about an association for themselves which might ultimately embrace even the manufacturers of complete household refrigerators, commercial equipment, and industrial refrigerating machinery.

1933

"And thus a definite movement gets under way for an organization that ultimately became the Refrigeration Equipment Manufacturers Association."

### Parts Makers Plan Organization In Chicago

**CHICAGO**—Manufacturers of accessories, parts, and supplies for electric refrigerators meeting here today passed a resolution calling for the formation of the Association of Electric Refrigeration Accessory Manufacturers to take a course of action in accordance with the provision of the National Industrial Recovery Act.

Manufacturers of fin coils, at a meeting in New York City (Aug. 8) called by J. W. Hatch, general manager of Bush Mfg. Co., are expected to join the accessories group organized today.



"Now that the problem's been settled, it doesn't seem so important. But it was then."

### What Is a Ton of Refrigeration, They Ask

**NEW YORK CITY**—What is a ton of refrigeration? That is a question which was raised and thoroughly aired in one of last week's A.S.R.E. meetings without finding an answer which satisfied even a majority. It is a question which has been facing a committee of the society since its recent appointment to settle the problem.

The question arises from an ambiguity in the A.S.R.E. definitions of a standard ton as a quantity of 288,000 B.t.u., and a standard commercial ton as a rate of 200 B.t.u. per minute or 288,000 B.t.u. per day. Both of these expressions have been shortened to "ton" in common usage, with the result that nobody now knows whether a ton is a rate or a quantity.

"Introduction of a new type refrigerant was to have numerous repercussions."

### PROPOSED CODE LETS DOWN BARS TO F-12 IN N. Y.

**NEW YORK CITY**—Exemptions for dichlorodifluoromethane (F-12) from practically all of the restrictions which now govern the use of refrigerants in New York City will be allowed if the amendment to the code filed March 1 is approved.

E. B. Newill, then vice president in charge of engineering for Frigidaire Corp., shows the new Frigidaire rotary compressor to famed C. F. Kettering, president of General Motors Research Corp. This compressor was used in two refrigerator models in 1933 along with a new refrigerant "F-114." The unit was the original of the one to become known as the "Meter Miser."



"Long warranty periods, that have raised many a heated discussion in the trade, got their start in 1933."

## 4-Year Replacement Contract At Cost of \$5 Offered by G-E

### BUYERS PROTECTED FOR 5-YEAR PERIOD

**CLEVELAND**—Circumventing that feature of the proposed refrigeration code, which limits the guarantee on an electric refrigerator to one year, the General Electric Co. has begun selling four-year replacement contracts, additional to the standard one-year warranty, with General Electric refrigerators.

Five dollars of the price of every G-E refrigerator is set aside for the purchase of this contract, which entitles the owner to replacement of defective parts, or of the entire mechanism, of the hermetically sealed G-E refrigerating machine for the four years following the expiration of the one-year guarantee.



"Meantime local appliance dealers were forming their own associations such as this one, which Clark Chamberlain has continued to manage."

### SAN DIEGOANS ORGANIZE APPLIANCE ASSOCIATION

**SAN DIEGO, Calif.**—In an effort to cooperate with the National Recovery Act, electrical appliance dealers in this district have organized a local association to be known as the Bureau of Radio and Electrical Appliances of San Diego County, according to J. Clark Chamberlain, secretary-manager of the new bureau.



"Not only was refrigeration equipment of all types prominently displayed at the fabulous World's Fair in Chicago, but it also played a prominent role in operation of many exhibits besides providing air conditioning and facilities for food storage."

### Refrigeration Exhibits Opened at Century Of Progress

**Air Conditioning, Commercial, and Household Models Prominent In Chicago Exposition**

"Competition was extremely keen, with the natural result that controversies were bound to involve the industry from time to time."

### Refrigeration Exhibit at 'Century of Progress' Starts Controversy

**Critics Say Advertisement Is Unfair and Misleading**

Reports have been circulated in the industry, verbally and by mail, that the Grunow advertisement in the June 21 issue of *ELECTRIC REFRIGERATION NEWS* contains statements which are untrue. Competitors assert that the Grunow claim: "Wins First Honors at World's Fair Century of Progress" is not justified. They point to a letter presumed to have been written by C. W. Fitch, Director of Exhibits, to the Grunow Corp. in which that company is rebuked for making the claim in the *NEWS* advertisement.

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

#### Universal Designs 10-Ton Machine

New Compressor Built for Air-Cooling Installations

#### KEROTEST DEVELOPS REFRIGERANT CHARGING STAND

#### New Cutler-Hammer Control Defrosts by Raising the Cut-In Point

#### ROTARY SEAL CO. DESIGNS NEW COMPRESSOR SEAL

#### G. E. INTRODUCING HOTPOINT MODEL TO WHOLESALE

#### Sam Vining Joins Westinghouse Staff

#### TAGLIABUE BUILDS 2 PRESSURE CONTROLS

#### GIBSON MARKETS HERMETIC LINE, ANNOUNCES KEROSENE UNITS

#### POTTER EMPLOYS 3-ZONE SYSTEM IN ENTIRE LINE

#### FRENCH'S NEW PROCESS MAKES LONGER REFRIGERATION TUBES

#### LANGE, SPOEHRER WILL START CONTROLS FIRM

#### Frick Enters Field With Methyl Machines

#### ALCO CO. ANNOUNCES NEW TYPE EXPANSION VALVE

#### McCord Makes Stainless Steel Ice Cube Tray

#### NEW ICE CUBE FREEZERS ANNOUNCED BY PEERLESS

#### VON MEYER MADE COPELAND USERS DEPT. MANAGER





"An interesting contrast to today's shortages of materials and government restrictions on productions is offered by this editorial comment back in 1934."

## Will Air Conditioning Save the Nation?

Only a miracle can relieve the citizens of the United States from the immediate necessity of deciding between three radically different types of government, declares Prof. Walter J. Shepherd, president of the American Political Science Association and dean of the literary college of Ohio State university.



That miracle, he maintains, would be the sudden revival of industry through the invention of some machine similar to the automobile which will become an immediate necessity in every American home.

To those Americans for whom the idea of signing away their individual liberties, their "fought-and-died-for" rights of political self-government, is anathema of the most maddening variety, let us point out that Prof. Shepherd's "miracle" might really come to pass.

His specifications for the miracle—"revival of industry through the invention of some machine which will become an immediate necessity in every American home"—are remarkably well met by air conditioning.

"The trend away from bunkers and baffles in commercial installations received further impetus as manufacturers introduced new products."

### LOUVERED DRIP PANS PERMIT FREER CIRCULATION THROUGH NEW PEERLESS COOLING UNITS

In announcing the new "Flash Cooler," Peerless Ice Machine Co. presents a new type of lowside for commercial application which, although a logical development, contains a number of new features. It consists of a complete lowside, the component parts of which are the fin coil and the "Direct Flow" high humidity drip pan.

"It was only natural that the NEWS should air condition its new home, but this presented two other unparalleled opportunities; a certain amount of practical testing of theories could be done by the NEWS itself; it could describe fully in words and pictures problems and solutions involved in air conditioning a residential type of structure."

### Many Visitors Express Their Approval of the Air-Conditioned Home of the NEWS



THE essence of the tremendous development of refrigeration from an infant twenty-five years ago, to a gigantic industry today, can be found in one profound fact—service to mankind...

Trace this great industry's growth, and, in actuality, you trace the growth and development of the American health, comfort and economy... Trace the marked strides forward in its equipment, techniques and facilities and you trace like strides in the fields of diet, medicine and industrial research... Trace this industry's progress and, in short, you trace the very progress and development of our American standard of living... As members of this vital industry, we at Detroit Lubricator are proud to join with Air Conditioning & Refrigeration News in viewing these mutual accomplishments of today, but accept them only as a challenge for greater achievements tomorrow!



DETROIT HEATING AND REFRIGERATION CONTROLS • ENGINE SAFETY CONTROLS • FLOAT VALVES AND OIL BURNER EQUIPMENT • DETROIT EXPANSION VALVES AND REFRIGERATION ACCESSORIES • STATIONARY AND LOCOMOTIVE LUBRICATORS

Serving home and industry. AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

# DETROIT

LUBRICATOR COMPANY

5900 TRUMBULL AVE., DETROIT 8, MICHIGAN  
Division of AMERICAN RADIATOR & Standard Sanitary Corporation  
RAILWAY & ENGINEERING SPECIALTIES, LTD.  
Canadian Representatives in Montreal, Toronto, Winnipeg.  
EXPORT DEPT.—Box 218 Ridgely, New Jersey



"Which refrigerant to use was more of a problem in 1934 than in later days."

## Eustis Compares Various Refrigerants, Says No One Is Perfect

By A. H. Eustis, President, Virginia Smelting Co.

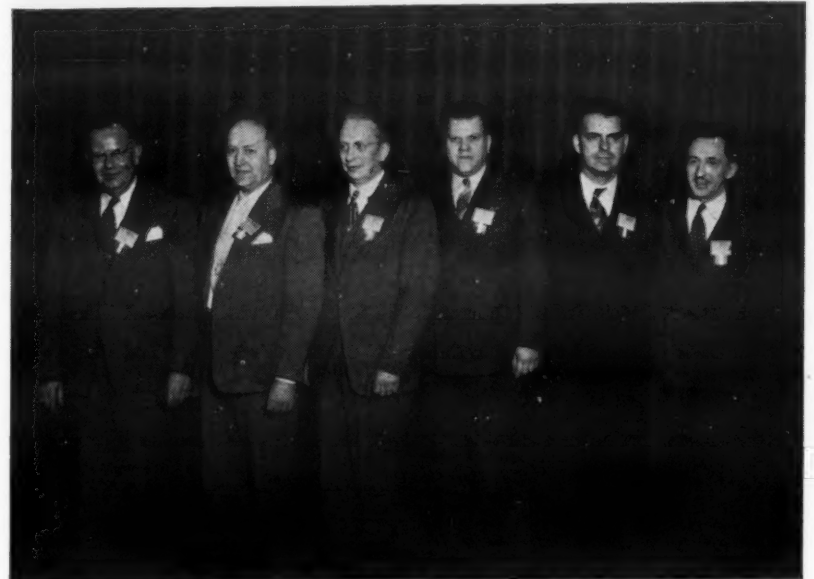
We are frequently asked: what is the advantage of sulphur dioxide compared to methyl chloride or perhaps some other refrigerant? Sometimes we hear much the same question in the form: which is the best refrigerant? These questions have always interested me, and I have given considerable thought to them.



"Anyone like to guess as to which color won the most votes?"

### Detroit Housewives Ballot on Norge Color Models

DETROIT—With 7,300 persons, mostly women, in attendance, Norge Corp. put on an elaborate two-day show in the mammoth Masonic Temple here last Wednesday and Thursday to get public reaction to various types of color combinations in refrigerator finishes.



To mention but a few of the individuals from the industry who have given unstintingly of time and effort to the Refrigeration Service Engineers Society through the years, here are Harold McDermott, national secretary since the founding of the organization; Archie Robertson, Charlie Harris, and Bill Marshall (former presidents); Walter Booth, former director; and Paul Reed, educational chairman. Though this picture was not taken in 1934, it was then that the servicemen banded together to form a national association to provide themselves with the broad technical knowledge that they needed.

## Installation and Service Costs Discussed at Convention

### Service Men Also Study Refrigerating Apparatus at First National Meeting

CHICAGO—Methods of estimating costs, making installations, shooting trouble, and charging for it were aired at the first national convention of independent servicemen here last Thursday, Friday, and Saturday. Operation and application of various refrigeration apparatus were also discussed in the series of service talks on dehydrators, expansion valves, commercial refrigeration and air conditioning coils, refrigerants, controls, and lubricants.

The meetings, which comprised the first annual convention of the Re-

frigeration Service Engineers Society, were held in a hall at 2111 W. Jackson Blvd. headquarters for the Chicago chapter.

Several times during open discussions, the questions of "unionization" and "city licensing" arose, but after heated remarks by both factions, the arguments were quelled.

At the final session it was decided that the object of the society should be purely educational, and these two questions are outside the scope of the national society, although local chapters may consider them.



"This development opened new markets for mechanical refrigerators, particularly in rural areas where wired homes were rare."

## Continuous Refrigeration Provided In Kerosene-Burning Electrolux

By Dr. W. R. Hainsworth  
Director of Electrolux Research Laboratories, Evansville, Ind.

"Refinements in engineering and application of unit coolers were gradually bringing a considerable change in the design of walk-ins."

### FORCED CONVECTION UNIT APPLIED TO COOLING OF COMBINATION MEAT & GROCERY BOX

By Arch Black, Melchior, Armstrong, Dessau Co.

For many years the design of butcher boxes has been unchanged, the conventional bunker arrangement being more or less standard either of the L or V type. Changing an ice system to electric refrigeration many times necessitated certain changes in the baffling, as experience taught,

but the amount of space lost for the bunker usually remained.

Blower type coils under various trade names have been tried with indifferent success for the past few years until now this type of unit operates very satisfactorily with several advantages over the finned coil.

"Chief among the features of the new refrigerant that were emphasized was that it was non-flammable and non-toxic, two of the major aims of the long but successful research required for its development."

## CHARACTERISTICS OF 'FREON' REFRIGERANT GIVEN FOR COMMERCIAL REFRIGERATION AND AIR CONDITIONING

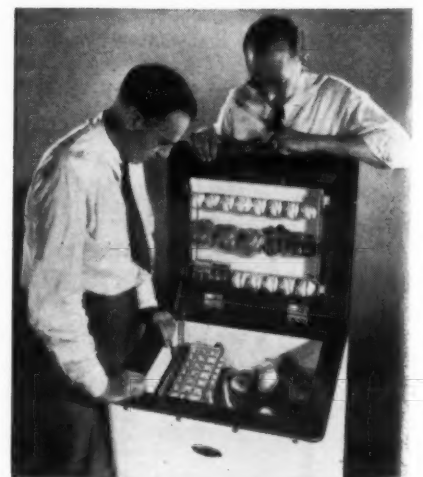
By R. J. Thompson, Refrigerating Engineer, Kinetic Chemicals, Inc.



"This was a radical departure in refrigerator design and was intended primarily for TVA sales at a list price of \$74.50 f.o.b. Cleveland."

### DOOR PLACED ON TOP OF BOX WITH UNIT IN BOTTOM

CLEVELAND—A new type household electric refrigerator, revolutionary in design by virtue of the fact that the door is "on the top" (like a lid), is being introduced by General Electric Co.

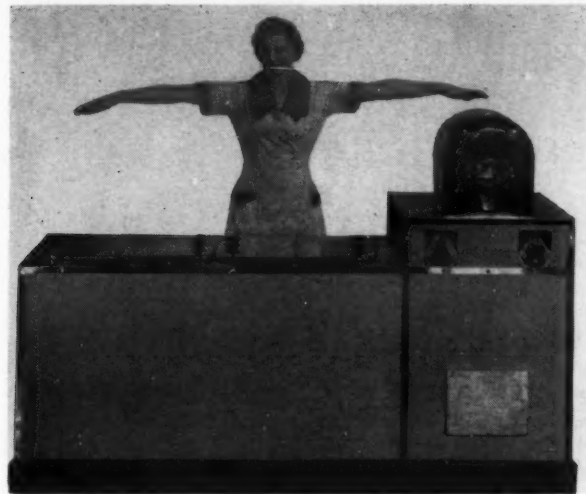


"Jobs were mighty scarce then, but sometimes the right man was hard to find for the job. Thus the long-time Michigan distributor for G-E came up with this idea."

### Caswell Experiment's with College Graduates As Salesmen

Lewis Crosley (left) and R. H. Money of the Crosley Radio Corp., inspect the first production model of the Crosley chest-type Shelvador electric refrigerator. The 4.2-cu. ft. unit was one of the ill-fated "TVA" models put out by manufacturers at the request of the government. It retailed at \$79.50.





Though the ice cream industry was an early user of electric refrigeration, it wasn't until the middle thirties that the counter freezer began to come into its own. This is a Whirlwind model put out by the Mills Novelty Co. The young lady shows that it really doesn't take up much floor space at all.

"The NEWS pioneered in supplying complete service data on all types of refrigerating equipment to an information-hungry host of readers."

## SERVICE CHART

Conventional Domestic Unit with Automatic Expansion Valve

## MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### New Westinghouse Range Will Retail for \$61.25

#### LIBBEY-OWENS-FORD DESIGNS WINDOW FOR CONDITIONED HOMES

TOLEDO—A new type of double glazed window, known as Thermo-pane, which is said to reduce heat loss through windows and to prevent frosting in cold weather is being acquired by the Libbey-Owens-Ford Glass Co. through a newly organized subsidiary, The Thermopane Co., it was announced by John D. Biggers, president of the parent company.

Fedders Develops Coils for Air Conditioning

#### Kelvinator Features Food Filing System

Chief among the new "convenience" features is the "food filing" system incorporated in all models of the deluxe line. This development consists of three entirely separate refrigerated drawer-like compartments suspended from the lower shelf in the food compartment. Dairy foods, vegetables, and leftovers are thus provided with classified and accessible storage space.

#### Brown Co. Becomes M-H Subsidiary

#### CHRYSLER CONDITIONER TO RETAIL AT \$175

DETROIT—Amplifying the announcement made in last week's issue of the NEWS that Chrysler has entered the air conditioning field, details have just been divulged of the first of a line of products—a floor-type air conditioning cabinet for summer and winter operation with a list price of \$175, without the remotely installed condensing unit.

"Through the years the NEWS has been frequently quoted and sometimes misquoted as the authoritative source of information on the refrigeration industry. It was such misuse (obviously unauthorized) of material that led to the editorial in question and the following reaction."

#### CONSUMERS' RESEARCH SPECIALIZES IN CRITICISM BUT 'CAN'T TAKE IT'

Threaten Suit Because of July 4 Editorial

Dear Sir: Our client, Consumers' Research, Inc., has drawn to our attention the issue of July 4, 1951, of Electric Refrigeration News, in which issue, on page 8 thereof you have a lengthy article with respect to Consumers' Research material.

Your naivete with respect to the confidential nature and protection of the material of Consumers' Research, Inc., is indeed surprising and, at the same time, arrogant. We must impress upon you the following well defined legal principles.

Cadwalader, Wickersham & Taft

#### Brunner Adds Two Machines to Line

UTICA, N. Y.—Brunner Mfg. Co. has extended its line of commercial condensing units with the addition of 2-hp. and 3-hp. water-cooled condensing units, for large commercial or air conditioning applications.

#### Universal Cooler Gets Million Dollar Order On Montgomery Ward

Henry Valve's Dehydra-Tector

CHICAGO—Henry Valve Co. is introducing a new dehydrator with a liquid sight pot through which a serviceman can look to see if gas bubbles are passing, indicating a shortage of refrigerant. The new product is known as the "Dehydra-Tector" and uses activated alumina as the dehydrating agent.

#### York Develops Four New 'Freon' Machines

#### AUTOMATIC DESIGNS REFRIGERANT VALVE

MILWAUKEE—Automatic Products Co. has just designed a new refrigerant control valve, to be known as type 70-N. One of its most important applications is for the control of refrigerant in evaporators of commercial systems with several low sides connected to one condensing unit.

#### Filtrine Co. Develops Shell-&-Tube Cooler

BROOKLYN—A new large capacity shell-and-tube water cooling tank has just been announced by Filtrine Mfg. Co. here. The cooler is available in capacities from one to 50 tons of refrigeration, according to Charles F. Hansel, president of the company, and can be used with from one to four condensing units using either methyl chloride or "Freon" refrigerants.

#### Hussmann-Ligonier Has Vegetable Case

ST. LOUIS—Allied Store Utilities Co. of this city, manufacturer of Hussmann-Ligonier commercial refrigerators, has introduced a refrigerated vegetable display case with "Humidicoiled" cooling units.

The coils are placed overhead, and provision has been made for temperature regulation to keep proper humidity conditions for the preservation of fresh vegetables.

#### McCray Builds Case Complete with Condensing Unit and Coils

KENDALLVILLE, Ind.—McCray Refrigerator Corp. has just announced its first self-contained refrigerated display case—which will be sold complete with condensing units, coils and valves, ready for connection to a power line.



## "Lehigh refrigerates everything from SOUP to NUTS"

Says the LEHIGH TEAM

Well, not exactly "nuts", but cold processed "rivets" for modern metal fabrication. As for "soup", LEHIGH today serves the complete frozen food industry—processing, storage and transportation. In food retailing, too, LEHIGH units enjoy wide acceptance for all types of display and storage equipment and are being written into the basic specifications of store builders and refrigeration contractors • This ever-widening use of LEHIGH BLU-COLD Condensing Units stems from good, solid reasons:

#### POLICY

—aggressive, cooperative, working in harmony with jobber, dealer, service man, original equipment manufacturer and refrigeration engineers.

#### ENGINEERING

—backed by over a quarter century of down-to-earth field experience. Actively engaged in research and refrigeration development for the industry.

#### MANUFACTURING

—large scale electric and air foundries. Modernly equipped machine shops. Metallurgical research laboratories. Multiple testing rooms with the finest of instruments and skilled personnel.

#### RATINGS

—pride of the LEHIGH TEAM! In strict accord with ASRE Code Standards. Ratings can always be duplicated in the field—in the job.

### ASK ABOUT THESE SPECIAL "LEHIGH TEAM" DEVELOPMENTS

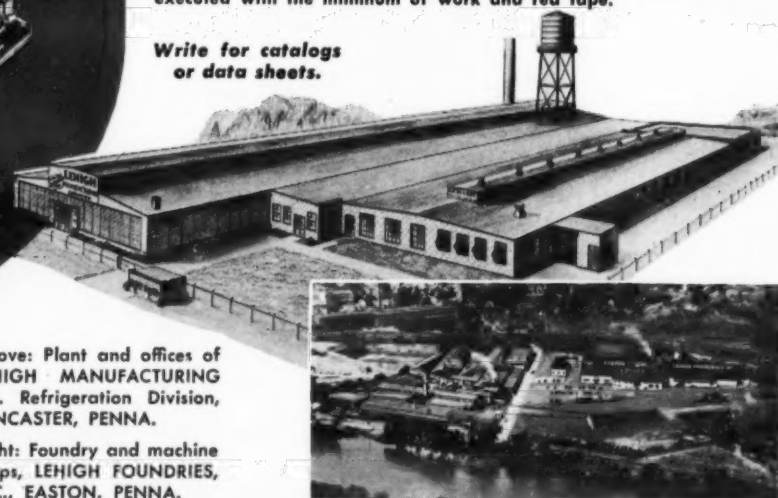
#### ★ Units for REFRIGERATED TRANSPORTATION

Extra rugged, compact units developed in cooperation with body builders and fleet owners. Protected against vibration and road shock.

#### ★ Fully warranted HERMETIC UNITS

Not only a design proven in many thousands of installations but, in addition, a simple, strong, 5-YEAR PROTECTION POLICY that can be executed with the minimum of work and red tape.

Write for catalogs or data sheets.



Above: Plant and offices of LEHIGH MANUFACTURING CO. Refrigeration Division, LANCASTER, PENNA.

Right: Foundry and machine shops, LEHIGH FOUNDRIES, INC., EASTON, PENNA.



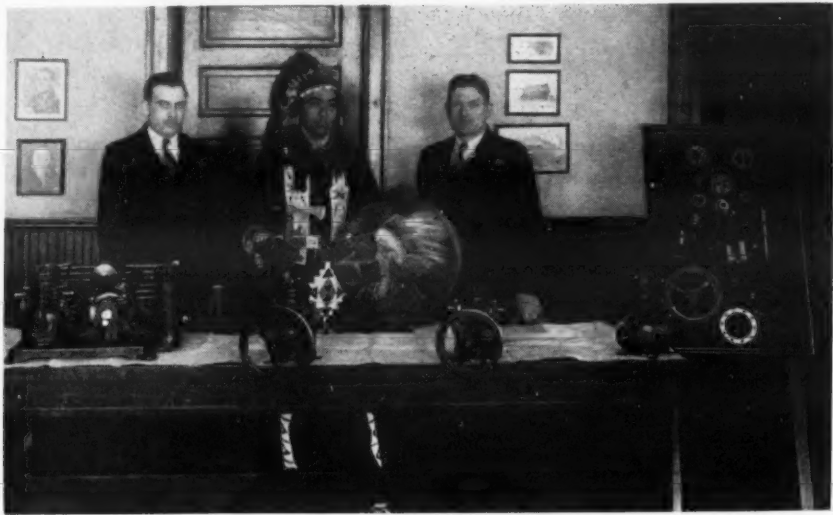
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Division of LEHIGH FOUNDRIES INC.

Plant—LANCASTER, PA.

★ Manufacturers of Malleable & Grey Iron Precision Castings • Refrigeration Equipment • Air Valves • Automatic Vending Machines





In Tecumseh, Mich. the Tecumseh Products Co. had started in a modest way, like many another company, to manufacture refrigeration "pumps" and complete condensing units. Here are Frank Smith (left), sales manager, and C. M. Brown, manager of the refrigeration division, with "Chief" Tecumseh, who symbolized the "Chieftain" name given the products, and the firm's "line" of products at that time. Today Tecumseh is near the top in total number of condensing units produced annually.



"This was the second big manufacturer in the household business to come up with a 'five-year plan' for hermetic service warranties. Many others were to follow suit."

"This market for commercial refrigeration has not yet been thoroughly exploited."

#### Eastern Apple Growers Construct Electrically Cooled Storage Houses

WAYNESBORO, Pa.—Installation of modern, mechanically refrigerated storage plants for a number of apple growers in the Appalachian apple growing territory has been made by the Frick Co. in the past few years.

Lawson Is Promoted  
By Frigidaire Corp.

## 1934



"Another 'first' is chalked up by the NEWS."

### AIR CONDITIONING SPECIFICATIONS

The first tabulation of specifications ever attempted by ELECTRIC REFRIGERATION NEWS on refrigerated air conditioning equipment is presented in the following pages of the Oct. 31, 1934 issue. The data were all furnished through the cooperation of various manufacturers.

"First cars, then complete trains, were air conditioned."

### White Will Be Worn

The New York Central railroad has advertised that "white will be worn on the 'Century,'" as the world's fastest long-distance train is completely air conditioned—with all windows closed and only clean filtered air in circulation throughout the train.

"The nation's chief weatherman seemed very impressed with the possibilities."

### 'Air Conditioning May Remake World Economic Map'—Gregg

CHICAGO—The development of air conditioning may remake the economic map of the world. Willis R. Gregg, chief, United States Weather Bureau, said at the dedication of the Frigidaire air conditioned house at A Century of Progress.

This cutaway view shows what refrigeration engineers of 1934 had come up with in the way of self-contained air conditioning equipment for offices and homes. This particular model was placed on the market by Frigidaire in that year.



"Both criticism and cooperation were found in the refrigeration industry when the Tennessee Valley Authority came upon the scene. . . . And then TVA's merchandising plan started in operation. . . . It wasn't long before repercussions of the TVA were felt by those on the firing line."

### Manufacturers to Furnish 'Price' Model for TVA

WASHINGTON, D. C.—Manufacturers of electric appliances will furnish one low-priced "leader" model from their lines to be sold through existing channels of distribution in cooperation with the plan of the Tennessee Valley Authority's directors to promote the widespread use of electric power consuming devices in the TVA territory, if recommendations made public last week by a special committee of the National Electrical Manufacturer's Association are followed.

### APPLIANCE SALE IS STARTED BY TENNESSEE VALLEY AUTHORITY

WASHINGTON, D. C.—The low-cost appliance promotion campaign of the Electric Home and Farm Authority in the Tennessee Valley Authority region officially opened May 21, it was announced by David E. Lilienthal, president of EH & FA. Sale of electric refrigerators, ranges and water heaters carrying the EH & FA emblem began in all areas served directly by TVA power and in the territories served by the Commonwealth and Southern Corp. utilities in Tennessee, Alabama, and Georgia.

### Georgia Dealers Say Government Plan Is Demoralizing Their Refrigeration Business in Tennessee Valley

WESTERN UNION TELEGRAM  
Atlanta, Ga.  
1934 July 16

Editor, Electric Refrigeration News, Detroit

Have read with considerable interest and approval your splendid editorial in July 11 issue which reveals a close study and thorough understanding of the TVA situation. As a result of this TVA situation the refrigeration industry in the Tennessee Valley is demoralized.

No merchandise is being sold here at list prices, dealers getting what they can. Seemingly the utilities are specializing in cut-price merchandise and dealers are forced to meet competition.

E. F. Yancey and Harry Lever, Chairmen Representing Independent Refrigeration Dealers of Georgia

"This one crops up perennially, so it seems."

### Refrigerator Built with Revolving Shelves

LONG BEACH, N. Y.—Revolving shelves for an electric refrigerator have been developed by Charles E. Passmore, a refrigerating engineer here. The outfit includes three shelves which are turned electrically by touching a foot pedal or hand button.



"A good serviceman could always find a job, so there were many who tried to learn all they could."

### 1,500 TAKING SERVICE COURSE OF CHICAGO INSTITUTE

Utilities Engineering Institute Helps Students Find Jobs  
And Offers Free Consulting Service to Graduates

"Styling of refrigerators to make them more attractive became an important design factor."

### G-E INTRODUCES MODERNIZED FLAT-TOP MODEL

Monitor Top on 2 Models Gets Stylish Sheath

### Watermelon Fills TVA Chest Model—Dealer Demonstrates

BIRMINGHAM, Ala.—To deride TVA-approved chest model refrigerators, a local appliance dealer recently put a chest model, containing a large watermelon, on display in his store. The melon completely filled the refrigerator.



"The answer to the first question seemed to be negative at this meeting."

### Selling by Department Stores Is Debated at G-E Meeting

CLEVELAND—Can a department store appliance salesman sell more than one line successfully? This was the question which was debated the longest at the Second Merchandising Clinic of department store executives conducted by the General Electric Co. at Nela Park.

Other topics considered by these merchandising experts included:

Are private brands more effective than nationally advertised brands?

How many lines should be carried and how many resources used?

# Our 60<sup>th</sup> Year OF REFRIGERATOR MFG.



1892



1951

Exclusively Private Label

**Ranney Refrigerator Company**

THREE GENERATIONS OF BETTER REFRIGERATION  
GREENVILLE MICHIGAN



# Imperial Products

*Leaders 25 years ago  
...now better than ever*

The history of the Refrigeration Industry's progress in Tube Working Tools, Tube Fittings, Valves, Driers and Charging and Testing Equipment is written in important measure in the history of Imperial Products.

During the Industry's 25 vigorous years of progress Imperial has consistently been identified among the leaders. Actually Imperial's pioneering goes back to 1905 when Imperial introduced the first flared tube fittings in this country.

A few "then" and "now" photos below are interesting examples of this continuing progress.

## Tube Fittings

**THEN** This sturdy pioneer in flare fittings did an excellent job in 1926. It was forged, and accurately machined to make tighter joints—just like its successors.

**NOW** Today, the modern design of Imperial Triple-Seal Fittings combines the special triple-seal groove in the seat, long Dryseal pipe threads, generous wrench flats and plastic protection caps to bring new extra safety and convenience.

## Shut-Off Valves

**THEN** Years ago the Imperial Sylpak Valve brought to refrigeration men the utmost in reliability and performance then available.

**NOW** Today, the Imperial DIA-SEAL Valve delivers even more—offers such outstanding features as: million cycle diaphragm, no springs, either-way flow, only two moving parts, inlet and outlet ports in line.

## Driers

**THEN** This old timer set the standard of drier performance in the old days. It was filled with calcium chloride.

**NOW** Modern Imperial TORPEDO Driers have one-piece copper shells, filtering area graduated with drier capacity, are charged with dust-free Silica Gel. Copper and brass construction.

## Flaring Tools

**THEN** This 75-F Flaring Tool was leading the way to better flares 25 years ago. Note that individual dies were used for the various sizes of tubing.

**NOW** Imperial ROL-AIR—the finest in flaring tools—both flares and burnishes. Flares are rolled out in the air with tubing extended above die block. It makes stronger flares, has single nut clamping, will not score the tubing.

## Tube Cutters

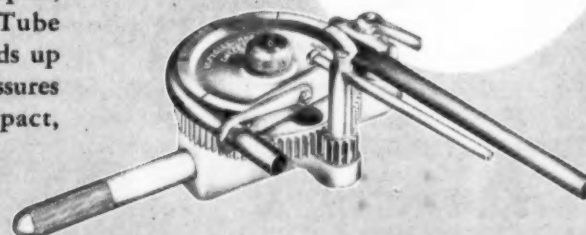
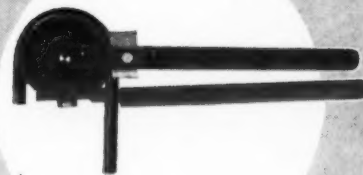
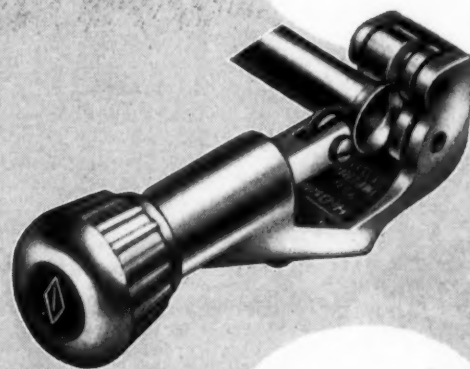
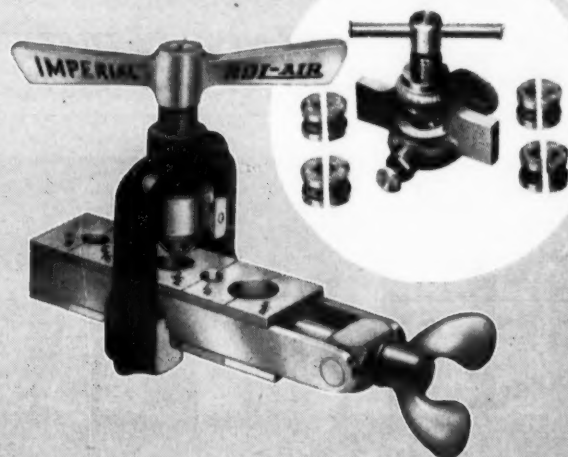
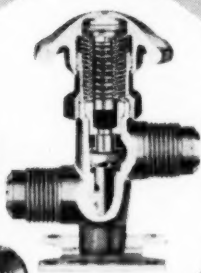
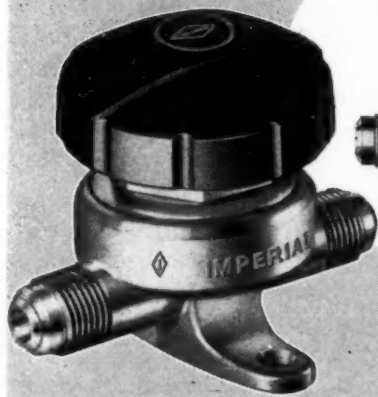
**THEN** This old 94-F tube Cutter was known as "a highly efficient tool for cutting tubing" some 25 years ago.

**NOW** Preferred by refrigeration men everywhere, the new Imperial 274-F has free wheeling ball-bearing action, is roller-type with flare cut-off groove; has retractable reamer.

## Tube Benders

**THEN** While lacking some of the refinements of present day tube benders, this sturdy looking tool was well liked by service men many years ago.

**NOW** Modern in every respect, this Imperial Gear-Type Tube Bender makes precision bends up to 180°. High gear ratio assures easy bending. Tool is compact, strong, light in weight.



*See Your Jobber*

Ask for Catalog 80

# IMPERIAL

THE IMPERIAL BRASS MANUFACTURING COMPANY  
565 South Racine Avenue, Chicago 7, Illinois, U.S.A.

FITTINGS • VALVES • DRIERS • FILTERS • FLOATS • CHARGING  
LINES • TOOLS for Cutting, Flaring, Bending, Pinch-off and Swedging





## They'll Do It Every Time . . . . By Jimmy Hatlo



## Do You Have 'Both Feet On The Ground'?

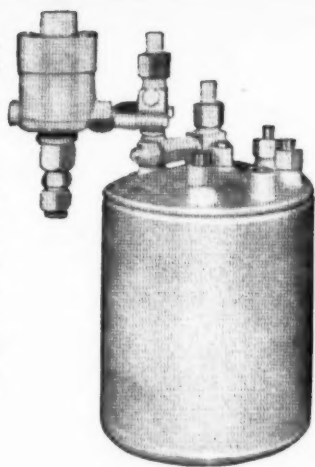
# TEMPRITE

INSTANTANEOUS...

WATER COOLERS  
BEVERAGE COOLERS  
CARBONATORS  
ACCESSORIES

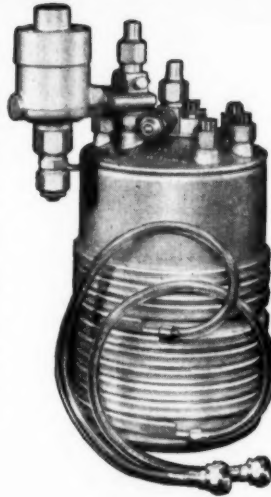
## WATER & BEVERAGE COOLERS

Compact Temprite water coolers operate on patented instantaneous cooling principle. There's a Temprite model for the smallest to the largest commercial or industrial application. Adaptable for use with carbonated beverages and many other special liquids. Constructed entirely of non-corrosive materials.



## BEER COOLERS

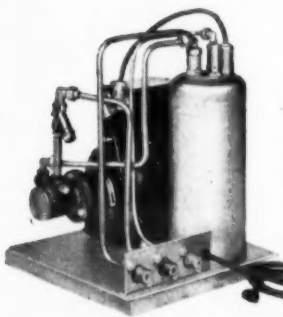
Actually cool up to 3 kinds of beer plus carbonated water and plain water in the same cooler at the same time. Patented control maintains perfect drinking temperature under heaviest loads and protects against needless draught beer waste. All stainless steel coils are easy to keep clean and high tensile strength offers safety and permanency. Beer coolers are obtainable with or without the outside water and soda water cooling coils if desired.



## CARBONATORS

Temprite Automatic Carbonators will deliver as many as 6450 glasses of highly carbonated water from a single 20 lb. tank of CO<sub>2</sub> gas. No loss of CO<sub>2</sub> gas through purges or vents. Gives peak carbonation at lowest CO<sub>2</sub> gas pressure.

Shown is the completely self-contained packaged unit. Temprite Carbonators are also available for remote installation of the pump, motor and relay assembly; and a Cooler-Carbonator assembly is offered which will cool and carbonate water at the rate of 300 glasses per hour, at a constant 40 degree temperature.



## EQUALIZER TANKS

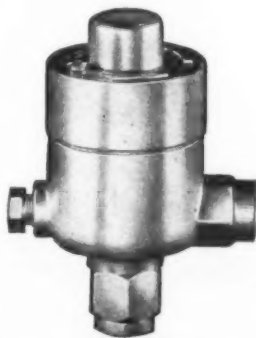
Prevents short cycling of condensing unit and permits temporary overloading of cooler without passing load directly on to compressor. Recommended in all Temprite installations except in large duplex systems. Made of cold rolled steel, electrically welded, pickled and neutralized; thoroughly cleaned and dehydrated. Aluminum finish. Approved by Underwriters.

## TWO-TEMPERATURE VALVES

Provide a wide range of adjustments and close temperature control. Essential to the multiple type refrigeration system, the Temprite 2-Temperature valve is also used on single applications where closer and more constant regulation is required than can be furnished by the condensing unit control switch.

Of the throttling type, these valves begin to close as the cooling unit approaches its required low temperature. The amount of refrigeration is thereby reduced, and all cooling units in the system reach their cut-out point about the same time, thus maintaining a better balance in the system.

Five models are available for use with Freon, SO<sub>2</sub> or Methyl Chloride refrigerant in capacities up to 250,000 B.T.U. Rugged construction, accurate control, and low pressure drop across the valve insure long life, satisfactory operation.



## OIL SEPARATORS

In capacities from 1/6 H.P. to 50 tons; removes over 98% of oil from the refrigerant gas along with dirt, scale, core sand, etc. Keeps oil in compressor, away from condenser, expansion valve, and evaporator coils. Permits the refrigerant to boil at its true boiling point. Heat transfer is increased up to 20%, thus evaporator temperatures from 4 to 7 degrees lower can be reached at no increase in operating time. Adaptor blocks are available to facilitate installation into systems up to 5 tons. Installed between head of compressor and discharge shut-off valve. Studs, bolts and gaskets included as a complete assembly.



**TEMPRITE PRODUCTS CORP.**  
ORIGINATORS OF INSTANTANEOUS LIQUID COOLING DEVICES

P. O. BOX 72-A, EAST MAPLE RD.  
BIRMINGHAM, MICHIGAN

Distributed in Canada by Refrigeration Supplies Company Ltd., London, Ontario

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

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U. S. Patent  
Office:  
Est. 1926



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VOLUME 64, No. 3, SERIAL NO. 1,174, SEPTEMBER 17, 1951

"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

## 'Integrity and Personality' Describe Our Industry

EXCITING is the word for the refrigeration business. Twenty-five years ago it was merely a gleam in the eyes of a few brave pioneers. Today it's one of the greatest industries in the world. Essentially, the story of its rapid-but-sound rise to prominence combines a romance, a series of biographies, and a treatise on sound economies and philosophy. Men of great personality and high intelligence made their dreams come true because they underpinned vision with integrity.

Few industries have been so "clean," ethically and competitively. Few businesses have attracted so many high-type men, and repelled blood-sucking parasites so successfully. From the beginning our industry has stressed *quality and service*. Shysters out for a "fast buck" have pushed their way in for a while, but seldom have lasted long.

That's why THE NEWS is so proud to be this magnificent industry's universally recognized spokesman.

Twenty-five years ago ELECTRIC REFRIGERATION NEWS was founded to promote the fledgling home refrigerator. Since then it has branched out to become the leading commercial refrigeration and air conditioning trade paper, as well as the top publication for freezers and home refrigerators (and their champion). Its hold on these related fields is undisputed. Household, commercial, and industrial refrigeration—plus air conditioning—comprise a loosely integrated industry devoted to *cooling*. THE NEWS blankets this field.

Trying to cover all these varied (but related) interests each week is a difficult job. BUT throughout a year of 52 issues, every reader receives loads of information on his pet subjects. No other publication in the world combines its unique features and prestige. As one major manufacturer has testified:

"If THE NEWS didn't exist, we'd have to invent it—at an alarming cost."

The theory of our founder, the late F. M. Cockrell, was this: If a publication dominates its field editorially, advertisers will appreciate its prestige, paid subscribers will trust it, and both will climb aboard the bandwagon. His theory was revolutionary in 1926, and still is. But it has paid off for us, and for every subscriber and advertiser. Editors of THE NEWS "call the shots" as they see them—candidly and frankly. That's why most readers of AC&RN renew their subscriptions automatically. They depend on its honesty when making decisions.

Slowly but surely the scattered air conditioning and refrigeration business is consolidating. The biggest dealers sell household and commercial refrigerators, freezers, and air conditioners. Each segment of the industry depends on the others (as more household refrigerators and freezers are sold, commercial refrigeration and service necessarily expand). And they all depend on THE NEWS for authentic information and leadership.

Those who subscribe to (and advertise in) AC&RN have joined a unique and exclusive club. They're salesmen, of course (even if they're listed as engineers or servicemen or executives). They have plenty of that rare stuff called "personality." At the same time they're men who cherish principles.

We're proud to represent this club, and we're proud of our record as "the conscience of the industry." Most of all, we're proud of the many fine friends who believe in us and our principles, and who have documented their friendship and trust by helping make this Silver Anniversary Issue our biggest.





An across-the-top freezer or, flat evaporator, was among the new features of the Gibson line for 1935, one of the first household refrigerator models to incorporate an evaporator of that design.

"It took years for the industry to reach an annual production figure of 1,000,000, but the gain of nearly 400,000 in 12 months—the largest in its history—showed that household refrigerators were really beginning to roll."

## Industry Sells 1,400,000 Units During 1934

DETROIT—Manufacturers of household electric refrigerators sold approximately 1,400,000 units to distributors and dealers throughout the world during 1934 to set a new all-time high record according to a tentative estimate just made by ELECTRIC REFRIGERATION NEWS after a close scrutiny of refrigeration industry activities during the past year.

"With methods of rating condensing units on a standard basis recognized by the industry as a whole, customers could make a better comparison of competing units. There were special difficulties with commercial units as noted here."

### RATING METHOD FOR COMMERCIAL UNITS APPROVED

DETROIT—Recently made public, the new set of conditions for rating commercial condensing units as proposed by the joint committees of the Refrigeration Division of National Electrical Manufacturers Association, American Society of Refrigerating Engineers, plus the Refrigerating Machinery Association has been approved by all three associations.



As outlined by W. M. Timmerman, General Electric refrigeration engineer and member of the Nema Refrigeration Division, the new ratings were evolved with regard to the following fundamental considerations:

Since condensing units are designed for operations at various suction temperatures, the standard suction temperature for rating purposes should approximate the design or application temperature. This resolves itself into the employment of several standard suction temperatures.

"This represented an improvement of 32% over the preceding year. Today, however, there are quite a number of individual manufacturers whose annual sales exceed the total of the entire industry for 1934."

### CABINET SALES IN COMMERCIAL FIELD SHOW GAIN

CHICAGO—Manufacturers of commercial refrigerator cabinets, display cases, and market coolers sold a total of 25,174 boxes valued at \$10,836,410 during 1934, according to records compiled by the Commercial Refrigerator Manufacturers Association and released to ELECTRIC REFRIGERATION NEWS by Paul H. Sullivan, executive secretary of the association.

"This fatal explosion, it was determined, was not due to refrigerant or faulty equipment, but resulted when oxygen was used to test the system for leaks. A coroner's jury decided it was 'accidental.'"

### STRICTER CONTROL PROPOSED AFTER BLAST IN CHICAGO

CHICAGO—Following the explosion of a compressor which was to have been part of the air conditioning system for the Mayfair Grill here, City Hall authorities of this metropolis have come to the conclusion that all installers of refrigeration and air conditioning systems should be thoroughly examined before licensing.

Never use oxygen to test for leaks. Oxygen and the mineral oil found in compressors unite to form a highly explosive mixture. (All oxygen manufacturers are extremely careful to eradicate all traces of mineral oil from containers and valves before permitting oxygen to enter.)



Room-type air conditioners of the console type had stylish lines as far back as 1935. Picture at left shows a York Corp. model BA-65 portable room air conditioner being installed in a hotel room.

"Franchises of leading makes were hard come by, yet the biggest department store had been offering 'boot-legged' models at cut rates. Serial numbers had been filed off so there was a considerable mystery as to where and how Macy's got its nationally advertised refrigerators."

### Ohio Dealer Duped Into Selling Refrigerators To Macy & Co.

NEWARK, Ohio—With the disfranchisement of Dwight Holland, crack Frigidaire dealer in this thriving Ohio city, the mystery of how R. H. Macy & Co., New York City's largest department store, has been able to obtain Frigidaires, Kelvinators, and other nationally advertised refrigerators, cut the prices and punch holes in the bottom of the market has begun to clear up.

Mr. Holland has told to ELECTRIC REFRIGERATION NEWS the entire story of how he had been duped into selling 143 Frigidaire 1935 models to two men in Columbus for supposed use as prizes in a radio contest, and how after these jobs accumulated in a Newark warehouse, shipments were made by truck addressed to Macy's in New York City.

"Who should sell refrigerators was something of a problem at times."

### Elimination of Part-Time Salesmen Sought by Birmingham Dealers

BIRMINGHAM, Ala.—Complete elimination of the part-time refrigerator salesmen as rapidly as possible has been recommended by a committee of the Birmingham Refrigeration Bureau of which John Shaw, president, is chairman.

If part-time salesmen are used at all the committee recommends that dealers pay them only 5% commission and that the difference between that and the regular commission of 10% to full-time salesmen be given to the latter.

Under the committee's plan dealers have the option of paying full-time salesmen either a 10% basic commission, plus 2% for making monthly quota, plus 1% for making yearly quota, or else straight 12% commission to salesmen who have demonstrated their earning ability.



"Sometimes the growing refrigeration industry changed so rapidly that not everyone in it knew exactly what happened unless they read the NEWS."

### Why Bring That Up?

Sales executives who go through the News each week with a fine-toothed comb (and most of them do) have been asking us recently why the NEWS is paying so much attention editorially to service information. "Why bring that up?" they ask. Now that electric refrigeration systems have been improved to so fine a point, service is no longer a great problem in the industry—or so runs the attitude of the sales managers. To answer their question in the same vernacular in which it has been propounded: "Brother, that's what you think."

A few years ago—even when machines may not have been so foolproof and troubleproof as they are today—manufacturers had the service problem pretty well in hand. They were able to train and maintain staffs of competent service men at strategic points all over the country, and thus handle every complaint that arose.

Today, however, with millions more refrigeration systems in use, with thousands of orphan makes out in the field, and with the prospect of added millions of machines going into operating in the very near future, the refrigeration service business has grown amazingly.

"Too much of a good thing began to be a problem for the air conditioning industry when store and theater owners advertised '20° Cooler Inside.' Moderation was obviously in order."

### Rhodes Proposes 'Specifications' For Air Conditioning to Avoid Over-Cooling



"Keen competition was present in a variety of forms, but some types weren't talked about much until stories like this one 'broke' in the NEWS."

### K. C. DISTRIBUTORS SIGN AGREEMENT TO END 'SPIFFS'

KANSAS CITY—In an effort to stabilize the market, prevent destructive competition, conserve profits, and protect the public, electric refrigeration distributors of this city have agreed to eliminate "spiffs" (special bonuses offered to salesmen of department stores and dealers handling more than one make to push a particular line of refrigerators), the Electric & Radio Association of Kansas City reports.

"The most interesting aspect of the NEWS plan to present a sales convention in print was the realization that the idea of mechanical refrigeration no longer had to be sold to most people. Their chief question was 'which make shall we buy?'"

### Cross-Section of Industry Sales Strategy Revealed In 'Paper Convention'

DETROIT—If competition is the life of trade, then 1935 should be an unusually lively one for electric refrigeration—if we may judge by the response to the invitation recently issued by ELECTRIC REFRIGERATION NEWS to the industry's leading sales managers. This invitation offered an opportunity for sales executives to address the readers of ELECTRIC REFRIGERATION NEWS as if they were one huge audience of dealers and salesmen in convention assembled.

"A prime purpose of this move was to help educate the new servicemen coming into the business and keep the veterans abreast of fast-moving developments and technical improvements made by the industry."

### Supply Jobbers Approve Plan To Sell "News"



"The seed of the idea that ultimately grew to bear fruit for the entire industry was originally planted by an editorial in the NEWS."

### Proposal: An All-Industry Exposition

ELECTRIC REFRIGERATION NEWS suggests that every factor in the refrigeration and air conditioning industries join for the purpose of staging an All-Industry Refrigeration and Air Conditioning Exposition in 1936. Place: Detroit.

"Numerous signs were beginning to appear that the New Deal's plan for regulating industry wasn't working out so well."

### AIR CONDITIONERS SAY NRA IS WORSE RACKET THAN AL CAPONE HAD

CHICAGO—The board of directors of the Furnace, Sheet Metal, and Air Conditioning Association of Illinois and Cook county voted last Friday to scrap the NRA code authority for that industry, and charged that "the NRA is a greater racket than any ever sponsored by Al Capone or any of his henchmen."



"All-electric kitchens were to become relatively common as the result of such joint promotional activities."

### NEMA & UTILITIES TO COOPERATE IN KITCHEN BUREAU

NEW YORK CITY—N.E.M.A. and Edison Electric Institute have joined together to organize the National Kitchen Modernizing Bureau, to promote the sale of electric refrigerators, ranges, water heaters, and other kitchen appliances.

"Switching from one refrigerant to another was not a matter to be considered lightly, so the industry was much interested in the design problems created by the Du Pont innovation."

### Williams Explains Factors To Be Considered In Building 'Freon' Compressors

NEW YORK CITY—Research and experiment conducted at the plant of York Ice Machinery Corp. demonstrated that compressors designed for ammonia should not be used with "Freon" and that there are very definite design considerations to be taken into account when a "Freon" compressor is being built, declared Llewellyn Williams, engineer in chief, York Ice Machinery Corp., at the A.S.R.E. meeting here.

"There were many 'orphans' in the new industry as in any other, and they were of more than historical interest for they offered a broad field for independent servicemen and likewise represented prospects for new sales."

### 'News' Collects Figures on Total Production of 'Orphan' Makes

DETROIT—Data showing total production of refrigerating machines by manufacturers who are no longer active in the field are being collected by ELECTRIC REFRIGERATION NEWS in connection with completing the industry history data which was compiled last summer.

"It's an ill wind. . ."

### Dust Storms Boost Sale of G-E Air Conditioners

NEW YORK CITY—Recent dust storms in the southwest part of the United States have furnished a new sales argument to dealers of air conditioning equipment, according to conclusions drawn from a survey conducted by the General Electric Air Conditioning Institute among G-E dealers in the areas affected by the storms.

"The industry went out of its way to cooperate with the New Deal at the beginning, but increasing government interference in business began to draw criticism."

### Refrigerating Machinery Leaders Launch Attack On New Deal

HOT SPRINGS, Va.—The New Deal and all its works was condemned by Stewart McNaught, general counsel for the Refrigerating Machinery Industry, in a speech before RMI members at their annual meeting.

"Another bit of evidence of progress was Frigidaire's decision to step out of the retailing end of the business. The industry was definitely established on solid ground."

### Frigidaire Branches In N. Y., Baltimore Quit Retailing

Executives of Frigidaire Corp.'s sales branches in New York City and Baltimore last week announced completion of arrangements whereby, effective Jan. 1, the branches will retire from actual retailing of household refrigerators in favor of independent dealers. The branches will remain in operation as wholesalers and general supervisory agencies, however.

"The increasingly popular new method of ice cream manufacture and sale was being felt by the old established dairy companies."

### Ice Cream Industry Cited for War on Counter Freezers

WASHINGTON, D. C.—A number of the principal dairy companies in the country were charged with unlawful restraint of trade through their efforts to fight off the inroads in their business made by the counter-type ice cream freezer in a Federal Trade Commission complaint.





# The most COMPLIMENTED Refrigerator IN THE WORLD!

When one product consistently sets the pace with exciting new ideas...striking new designs...unprecedented public acceptance...the result is almost certain: Other manufacturers attempt to imitate the leader.

That's why we say — the Crosley Shelvador® Refrigerator is the most complimented refrigerator in the world! Today, almost every other make of refrigerator you can name pays Crosley the sincere compliment of trying to copy it in one way or another.

®Shelvador is the registered trade-mark that designates products of the Crosley Division of the Avco Manufacturing Corporation.

**CROSLEY** DIVISION  
Cincinnati 25, Ohio



SHELVADOR® REFRIGERATORS . . .

SHELVADOR® FREEZERS . . .

ELECTRIC RANGES . . .

ELECTRIC

FOOD WASTE DISPOSERS . . .

STEEL KITCHEN CABINETS . . .

SINKS . . .

RADIOS . . .

ELEVATORS





Only  
**CROSLLEY**  
 gives you the  
**SHELVAADOR**  
 DESIGNED FROM THE WOMAN'S ANGLE





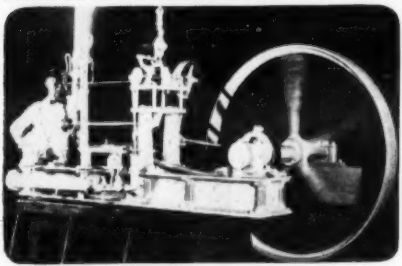
The independent refrigeration parts and supplies wholesaler had become an increasingly important factor in the industry in the early thirties, and by 1935 a group of such firms was ready to band together in an association (the present REWA). Pictured above is a refrigeration supplies wholesaler's "parts counter" as it appeared in those days, this particular one being in the Chicago store of the Harry Alter Co.



"This probably sums up the role of the 'jobber' or parts wholesaler as well as anything said before or since."

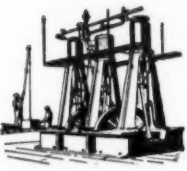
### Colyer Explains the 'Tricks of the Trade' in Jobbing Refrigerator Parts and Supplies

J. D. Colyer of Wolverine Tube Co. in discussing parts jobbing, says (1) "It's an important business. The good jobber must have an adequate stock and give real service." (2) "He must be prepared to make quick deliveries." (3) "He should display his stock, so buyers can see what they're getting." (4) "He ought to know refrigeration, and be able to advise service men on their problems." (5) "If he does a good job of taking care of his trade he can get a fair price for his goods and need not worry about 'mail order competition.'"

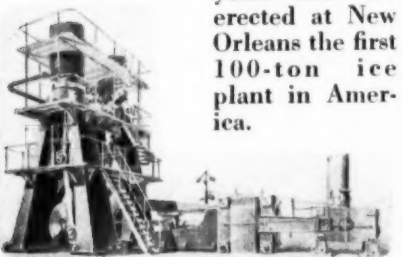


Frick Steam Engine of 1856, Now in the Ford Museum

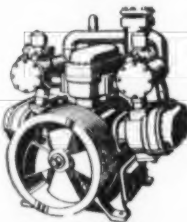
## 98 Years of Frick History



Frick Compressor of 1883



27" x 48" Compressor of 1896—then Largest in the World



9-Cyl. NEW "ECLIPSE" Compressor for Freon-12



4-Cyl. Ammonia Compressors with 1250-Hp. Motors at Amcelle, Md.



### NEWS Entertains ASRE At Refrigeration Fiesta

The new addition to the home of ELECTRIC REFRIGERATION NEWS will be opened for inspection on Wednesday evening, May 22, when the American Society of Refrigerating Engineers meets in Detroit. A full evening's entertainment will be provided by the NEWS for the visiting engineers and their wives. A large number of Detroiters, prominently connected with the refrigeration and air-conditioning industries, will assist in welcoming the out-of-town guests.

"It was through this series in the NEWS, later republished in book form, that countless numbers learned how to become good service and installation men."

## SERVICE

### Fundamentals of Refrigeration

By K. M. Newcum

Editor's Note: The following is the first of a series of articles written by K. M. Newcum for the special benefit of refrigeration and air-conditioning installation and service men. This article deals with the fundamental principles which must be understood by the beginner before going into the design and operation of equipment.

## MCCORD CONDENSERS

NO JOINTS  
MAXIMUM HEAT TRANSFER  
COPPER BRAZED  
FULL SIZE BENDS • NO JOINTS  
COMPLETE RANGE OF SIZES  
VARIOUS FIN WIDTHS

UNDERWRITER  
APPROVED

UNDERWRITERS APPROVAL INSURES A SATISFACTORY PRODUCT IN SERVICE.  
Write for Engineering Information

MCCORD CORPORATION  
DETROIT

"It was at meetings sponsored by the NEWS and held in the offices of The Newspaper of the Industry that their first permanent associations were formed, by parts wholesalers and equipment manufacturers, organizations that have since contributed greatly to the industry's progress, especially in commercial refrigeration."

## REFRIGERATION SUPPLY JOBBERS ORGANIZE

### Manufacturers of Parts Also Form Association at Detroit Meeting

By Phil B. Redeker

DETROIT—Jobbers of refrigeration supplies, meeting Oct. 25 at the home of ELECTRIC REFRIGERATION NEWS, banded together to organize the National Refrigeration Supplies Wholesalers Association, to insure the development of their rapidly growing branch of the industry along sound, healthy lines.

DETROIT—Nearly 100 representatives of manufacturers of refrigeration parts and supplies met here last week to lay the groundwork for a permanent association of such manufacturers, and to draw up a standard definition of a jobber of refrigeration parts and supplies as a first step towards bringing some sort of order into the refrigeration parts business.

General purpose of the association, according to opinions voiced at the meetings, will be to sponsor better cooperation among the parts manufacturers in establishing the distribution of their products on a high plane, and coordinating their efforts to support the legitimate distributing outlets for their products.

"The 'welcome mat' was always outside the front door of the NEWS, which gave its wholehearted assistance to help the industry solve its problems."

### Jobbers of Parts To Assemble in Detroit Oct. 23

DETROIT—ELECTRIC REFRIGERATION NEWS will hold "open house" all Wednesday afternoon, Oct. 23, 1935, where the refrigeration supply jobbers and manufacturing representatives will hold informal conferences on problems of mutual interest.

At 6 o'clock a buffet supper will be served at the home of the NEWS, after which the group will adjourn to the Hotel Fort Shelby to attend the "Exhibitors Frolic" to be staged by the Refrigeration Service Engineers Society.

The meeting of refrigeration supply jobbers sponsored by the Detroit committee is the result of frequent suggestions that something should be done to straighten out the tangled conditions which have developed in the replacement parts and supply branch of the industry.

## 1935

"Exaggerated accounts of how much water was required by air conditioning systems brought the answer that cooling towers cut water consumption 95% and likewise made possible a considerable saving for the owner."

### YORK ENGINEERS DECLARE COMFORT COOLING WILL NOT CAUSE WATER SHORTAGE

"Popularity of air conditioning was steadily increasing, but even in the second largest city in the country, the number of installations per year was so small (239 in 1934) that the NEWS could list the name and address of every purchaser as well as the make and size of equipment, thanks to cooperating utilities. By the end of 1934 a total of 617 had been installed in Chicago, counting even the smallest room units."

### Table 1—Summary of Air Conditioning Installations In Chicago.

"A feeling of relief at the lifting of the government's heavy hand is coupled with a high spirit of confidence that the industry will maintain its present standards and improve its position," the NEWS commented in reflecting reactions of industry executives."

## NRA Out—What of It?

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### Westinghouse Engineer Explains How Changes Were Analyzed & Made in Designing Unit for 'Freon'

By J. H. Ashbaugh, Manager

Refrigeration Engineering Department, Westinghouse Electric & Mfg. Co.

#### Schoolroom Conditioner Introduced by Trane

LA CROSSE, Wis.—Introduced by the Trane Co. here is the Air-O-Lizer, a compact unit for schoolroom air conditioning, in which direction flow grilles make it possible to turn the heated air into the room in any desired direction, so that windows and wall spaces are curtained with heat.

### ACMA Drafts Air Conditioner Ratings & Tests

WASHINGTON, D. C.—Standards for rating and testing air conditioning equipment, have been prepared under the direction of the engineering standards committee of the Air Conditioning Manufacturers Association.

The standards are the work of a joint committee, representing the A.S.R.E., A.S.H. & V.E., N.E.M.A., the Refrigerating Machinery Association, and ACMA.

#### AUTOMATIC PRODUCTS DESIGNS VALVE FOR 'FREON' AND METHYL

MILWAUKEE—Recently introduced by Automatic Products Co. after two years of field tests, is a new thermostatic expansion valve designed for use with "Freon" and methyl chloride on air-conditioning and commercial refrigeration systems.

Claimed for the new valve is construction with a minimum of parts, accurate maintenance of the desired

#### TECUMSEH MARKETS 2-CYL. COMPRESSOR

DETROIT—Tecumseh Products Co. is introducing a two-cylinder compressor, using many of the same parts as the single-cylinder reciprocating type unit which the company has been manufacturing for the past three years.

#### Westinghouse Tests Electric Air Filter

PITTSBURGH—Several experimental models of an electrical unit to remove dust, soot, pollen, or other solid and liquid particles in air have been installed in homes and offices by Westinghouse Corp.

Electrically the unit is so arranged that it draws particle-filled air past two small wires, suspended horizontally.

### Air-Cooled Unit Used for York's New Conditioner

YORK, Pa.—Portable and air cooled so that no water connections are required, a new self-contained air conditioner has just been announced by York Ice Machinery Corp. A special feature of the new unit is its provision for positive introduction of fresh air into the conditioned space.

With all elements incorporated inside a stylish cabinet, the unit provides for cooling, dehumidifying, cleaning, circulating, and refreshing air in a room.

#### G-E INTRODUCES BALLTOP MODEL

### LIPMAN BUILDS SELF-CONTAINED FLOOR TYPE UNIT

BELOIT, Wis.—Featured in the 1935 line of Lipman air conditioners, manufactured by General Refrigeration Corp. here, is a self-contained floor-type unit conditioner with a cooling capacity of approximately five tons of refrigeration.

The Lipman self-contained conditioner is equipped with a 5-hp., four-cylinder Lipman compressor, located in the base of the unit.

### Hertzler Will Manage Air Conditioning Dept. of York

### '35 Gibson Has Flat Evaporator & Modern Lines

GREENVILLE, Mich.—Incorporating a considerable number of new features—chief among them being the "Freez'r-shelf" or flat evaporator—a 1935 line of household electric refrigerators with a distinctive modernistic cabinet design has just been introduced by Gibson Electric Refrigerator Corp.

The "Freez'r-shelf" extends all the way across the width of the cabinet interior at the top. It is sufficiently removed from the top to make room for double-depth ice cube trays.

#### Harry Alter Co. Catalog Lists Refrigerator Parts

CHICAGO—The Harry Alter Co., distributor of radio, electrical, and refrigeration parts and supplies, has just issued a 64-page catalog listing a complete line of parts for refrigerator servicemen and dealers. The catalog is devoted exclusively to refrigeration supplies.

### T. K. Quinn Resigns; C. E. Wilson Will Direct G-E Appliance Activity

#### WESTINGHOUSE LINE FEATURES REVOLVING SHELF, STREAMLINING





# A Gilt-Edged Security for a Silver Anniversary

Air Conditioning and Refrigeration News' "Silver Anniversary" put us in a reflective mood.

We got to thinking about a job we once did for the New York Stock Exchange. That was back in 1905 (almost a subject for a *golden* anniversary), and it was at that time the largest installation of air conditioning in the world.

Then our mind leaped to the present and the job we just finished for Dun & Bradstreet—a centrifugal refrigeration installation for the complete chilled-water air conditioning of its new 12-story building in Manhattan.

That leap over the years passed a good many

milestones in our history—and in the history of air conditioning. Worthington engineering, based on the longest experience of any manufacturer with liquid and gas handling equipment, has been responsible for many of the advances in air conditioning and refrigeration.

As far back as 1889, our engineers pioneered the development of refrigeration and dewaxing equipment for oil refineries, making possible the manufacture of lubricating oil from crude petroleum.

Today, Worthington offers two important advantages to your customer:

**1. A complete line**—designed, built, and backed by *one* company, Worthington.

**2. The most modern equipment** in all size ranges . . . so that we can recommend, without prejudice, the installation most suitable to individual requirements.

When you install a Worthington system, your customer is investing in a "gilt-edged security"—*profiting* from perfectly balanced operation, *protected* by unit responsibility. Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J.

## WORTHINGTON



AIR CONDITIONING AND REFRIGERATION  
The Most Complete Line . . . Always the Correct Recommendation





"When did the now well-known 'Meter-Miser' enter the refrigeration picture? Here's your answer, and also another indication of the trend to hermetics."

## FRIGIDAIRE ADOPTS HERMETIC AS STANDARD; CAMPAIGN OF 'PROOF-SELLING' LAUNCHED

Five-Year Protection Plan Included In Purchase Price of 16 Models

"Those who think the all-year-round absorption air conditioning unit is of rather recent vintage might be surprised by this story published in the NEWS 15 years ago."

### Williams Air-O-Matic Uses Absorption Unit

BLOOMINGTON, Ill.—Year-round air-conditioning units providing cooling through a new type of absorption refrigeration unit, and heating by low pressure steam through indirect steam radiation, have just been introduced by Williams Oil-O-Matic Heating Corp. and will be marketed under the name "Air-O-Matic."

"Distribution patterns were beginning to jell for the still fairly new refrigerant."

### PRICE OF 'FREON' CUT; CYLINDER TRADING PLAN ANNOUNCED

"On the whole, if any absorption of the one by the other has been done, it was refrigeration firms who added sheet metal departments to their air conditioning operations."

### Leading Detroit Heating Contractors Prefer to 'Farm Out' Refrigeration Operations

DETROIT—Heating and sheet metal contractors on the whole have not found it worth while to add refrigeration departments to their organizations to facilitate air-conditioning installation work, was the general impression gained from interviews with several of the oldest Detroit firms recently.

"Organizations such as the International Association of Electrical Leagues have done much to further the interests of the refrigeration industry."

### ELECTRICAL LEAGUES FORM ASSOCIATION

"Growing popularity of the new method of making and selling ice cream was to become increasingly evident."

### 1,460 Counter Freezers Sold During 1935

CHICAGO—Sales of counter freezers during 1935, as reported by members of the Counter Freezer Association, totaled 1,460 units, with a dollar volume of \$1,493,072.23, according to C. S. Clark, secretary-treasurer of the association.

The Newspaper of the Industry

# REFRIGERATION NEWS

"Problems were many as distribution patterns began to develop in the parts business. These were ironed out largely through the work of associations."

## Parts Makers' Association to Extend Service

DETROIT—Membership list of the Refrigeration Supplies and Parts Manufacturers Association now totals 46 manufacturers, Frank J. Gleason secretary of the Association, reported last week.

Gleason also announced last week that committees are to be formed for each product classification represented in the Association. "These committees will take up any problem which the manufacturer or jobber may present with respect to policy on a particular product."

"Everybody wanted to get into the act apparently, and even today new firms are entering the business."

## Jobber Activities

By H. W. Small

Jobbermania is sweeping the country in a manner reminiscent of the flu epidemic in 1918. No definition of this condition can be found in the Pharmacopoeia, but its symptoms can be readily recognized by the patient's rabid enthusiasm for entering the business of jobbing refrigeration parts and supplies. It is extremely contagious and has been spread by word of mouth and personal contact as well as by auto-intoxication.

The refrigeration parts jobbing business is not the road to easy wealth. It is highly technical and consequently needs technical administration of sales and purchases. This means a relatively high overhead when compared to many lines of merchandise. The jobber's gross margin of profit is no more, and in many cases is less than these standard merchandise lines.

"Bakeries still are an excellent market for the commercial refrigeration industry."

### Bakeries Use Refrigerators For Dough Storage

MINNEAPOLIS—Bakeries are becoming an increasingly good market for electric refrigeration because such facilities enable them to prepare their dough in advance and store it until needed, reports W. H. Snyder, commercial manager of O. F. Stuefer, Inc. here.

AIR CONDITIONING AND

Written To Be Read on Arrival



"When the NEWS celebrated its 10th Anniversary, it also changed its name to the present 'Air Conditioning & Refrigeration News,' recognizing the tremendous strides made by air conditioning."

## 1926--Tenth Anniversary Number--1936

Features of the Tenth Anniversary Number, Sept. 9, 1936  
A 10-Year History of the Industry



When Texas celebrated its centennial in 1936, it tossed an exposition that displayed a great number of refrigeration products. Always first in something, Texas claimed that this was the first time in history that models were posed on top of a walk-in cooler. The exhibit was Frigidaire's.



"First-hand reports on industry activities and people throughout the world plus interesting descriptions and pictures of foreign countries and customers were to fascinate NEWS readers for several months."

## Editor Starts World Tour From Kelvinator Meeting

### Reports Surprise Features of 1936 Line & Plan of No. 1 Story of 'World Series'

"Long guarantees were both a good sales point and evidence of vast gains being made in the engineering and production of household refrigerators."

### NORGE 10-YR. PLAN APPLIES TO ROLLATOR ONLY

Covers Replacement Cost; Five-Year Plan for Certain Other Parts

DETROIT—Norge Corp. has announced, effective immediately, an "extended service protection plan" on its household refrigeration unit, in addition to the regular one-year warranty covering parts and service which has been the policy heretofore. Norge is now offering a five-year warranty on certain mechanical parts and a 10-year warranty on the rollator compression unit only.



"In the matter of licensing and codes, Detroit was something of a pioneer among the large cities."

### Only Licensed Contractors May Operate In Detroit

DETROIT—The common Council of the City of Detroit has passed an ordinance requiring that all persons engaged in the inspection, regulation, and operation of ice making, cooling, and multiple refrigeration plants be licensed and post a bond of \$1,000. The ordinance, which first came before the Council at its Jan. 7 meeting, is designed to raise the standard of refrigeration contracting and service work in the city. It has the backing of the local chapter of Refrigeration Service Engineers Society and of Detroit Refrigeration Contractors, Inc.

"The electric range industry was 20 years old and by now was really ready to move, thanks to lowered costs of operation, faster cooking, minimum service, and support of combination gas and electric utilities."

### Reese Mills Tells How Barriers To Sales of Electric Ranges Have Been Toppled

CHICAGO—The electric range industry has "arrived" and there are no longer any barriers to restrict the sales of this major appliance. That was the message given to the utility sales executives at the third annual Edison Electric Institute sales conference by Reese Mills, manager of range sales for Westinghouse Electric & Mfg. Co.

"Bootlegging of parts was not uncommon until manufacturers decided to let the independent servicemen buy factory-built replacements."

### Distributors to Sell Frigidaire Parts to Service Men

DAYTON—Formal announcement was made last week by Virgil A. Hetzel, installation and service manager of Frigidaire Corp., that independent refrigeration service operators may now obtain Frigidaire manufactured replacement parts.

## MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### Ansul Began Making SO<sub>2</sub> During 1915

A pioneer in large-scale production of liquefied sulphur dioxide refrigerant, the Ansul Chemical Co., Marinette, Wis., began manufacturing operations about 21 years ago under the direction of the present president, F. G. Hood.

Shortly after the World War, H. V. Higley, formerly chief chemist for the Isko Co., became associated with Mr. Hood in the Ansul firm. During this time, major attention of the company was held toward advancement of sulphur dioxide as a refrigerant.

### RANCO BUILDS LINE OF COMMERCIAL CONTROLS

### Fogel Moves to New Philadelphia Plant

PHILADELPHIA—With its removal to a new plant at 1603 Vine St. here, Fogel Refrigerator Co., manufacturer of commercial refrigerators and display cases, expects to increase production 100% during the coming year.

### WESTINGHOUSE MARKETS 3 'FREEZE-PROOF' WATER COOLERS

MANSFIELD—Three new "Freeze-Proof" water coolers, especially designed to operate in temperatures below freezing, have just been introduced by Westinghouse Electric & Mfg. Co. The coolers are intended for general industrial use, such as in steel mills, factories, and other places where they may be subjected to sub-freezing temperatures.

### IWASHITA IS APPOINTED ASST. S-W ENGINEER



"There was considerable jubilation in the air conditioning industry when the Auditorium patents covering by-pass and recirculated air systems were invalidated."

## Another Threat of Patent Monopoly Is Banished

Air-conditioning history was made when the U. S. Circuit Court of Appeals affirmed the decision of U. S. District Court Judge Alfred Cox in the case of Auditorium Conditioning Corp. vs. Warner Brothers Pictures, Inc., invalidating the patents owned by Auditorium covering the by-pass system and the use of recirculated air in air-conditioning installations. (See news report in April 22 issue and a complete text of the District Court decision in the April 29 issue of the NEWS.)

"The alert and enterprising retailers were going great guns."

### Spot Radio Broadcast Helps Atlanta Dealer Close 1,000 Sales

Spot radio broadcasts and an unusual campaign of "blind" advertisements in the classified columns of local daily newspapers helped Clare & Co., Atlanta Westinghouse dealer, to sell approximately 1,000 refrigerators in 1935.



"Franchises meant something to manufacturers, distributors, and dealers, and the courts, too."

### Hartford Court Ruling In Rackliffe Case Puts Approval On 'Exclusive Franchise'

HARTFORD, Conn.—Judge Newell S. Jennings of Hartford County Superior Court has overruled the demurrer, alleging violation of the Sherman and Clayton anti-trust laws, filed by Mayflower Sales Co. of this city in its defense against a breach of contract suit filed by Rackliffe Bros., Inc., Kelvinator Connecticut distributor.

### KELVINATOR TO MERGE WITH NASH MOTORS

Combined Assets Will Make \$50,000,000 Corporation

DETROIT—A plan for the merger of Kelvinator Corp. and the Nash Motors Co. has been adopted and will be submitted to the shareholders of both companies it was announced by George W. Mason, president and chairman of the Kelvinator board.

### Saylor Heads Promotion

Wilbur E. Saylor, veteran of refrigeration promotion campaigns, recently was appointed to head all Kelvinator sales promotions.

### MILLS NOVELTY CO. DEVELOPS LINE OF COMMERCIAL UNITS

CHICAGO—Mills Novelty Co. has entered the commercial refrigeration field with a line of condensing units from ¼ hp. to 7½ hp. in both air-cooled and water-cooled models, for both commercial and air-conditioning applications. The units will be sold through regular dealer channels.

### RANCO BUILDING NEW FACORY & OFFICES

### New Vert-E-Fex Unit Circulates Air Through Forced Down-Draft

CHICAGO—Said by its designers to combine the advantages of gravity circulation (as in double bunkers) with controlled forced draft circulation, a new type of cooling unit for commercial refrigeration applications has just been introduced by Refrigeration Appliances, Inc.



By 1936, a new phase of the industry began to develop. That was the reconditioning shop for old refrigerators dealers had taken in trade. This picture shows operations going on in one of these early reconditioning shops.

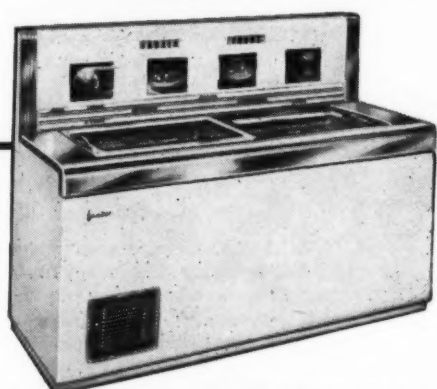


# THE JORDON GOAL FOR TOMORROW IS EVEN HIGHER...

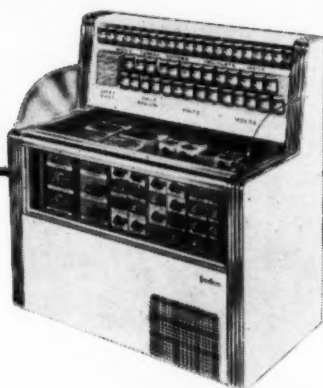
**JORDON** has reached a top position in the refrigeration industry by adhering to a creed adopted many years ago—and supported in full today. Briefly, this creed is:

- ★ To use nothing but the finest and most approved materials
- ★ To research, test, improve and work constantly toward better processing and improved production.
- ★ To keep abreast of the times — and to pioneer in the development of new and improved cabinets and refrigeration — for more profitable merchandising, for improved storage and display.
- ★ To keep prices down to the lowest consistent with good quality and dependable service.
- ★ To make the tradename "JORDON" a symbol of Quality, Fair-dealing and Progress in the refrigeration industry.

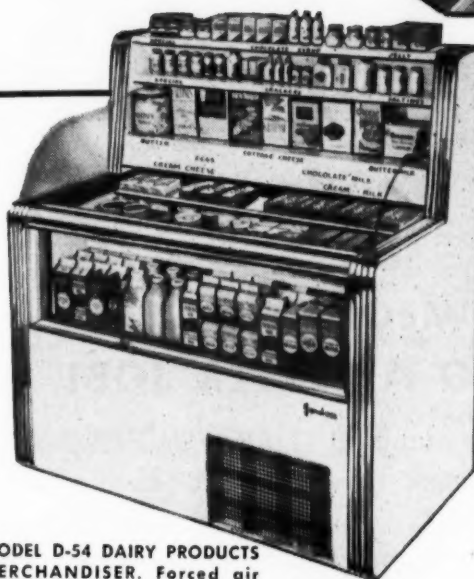
## HERE ARE TOP PROMOTION MODELS FOR EVERY DAY PROFIT MAKING



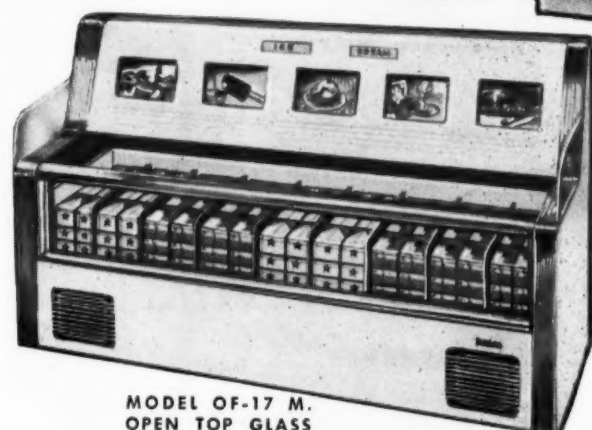
MODEL M-17 SLIDING DOOR FROZEN FOOD & ICE CREAM MERCHANDISER. Capacity approx. 625 standard packages. Height (less superstructure): 36". Length: 76". Depth: 29"



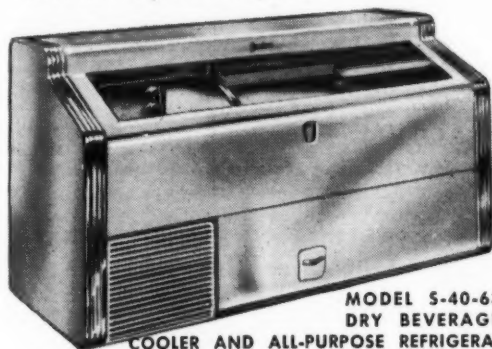
MODEL OF-9 OPEN TOP, GLASS FRONT FROZEN FOOD and ICE CREAM. Capacity approx. 320 standard packages. Overall height: 58½". Length: 54½". Depth: 30".



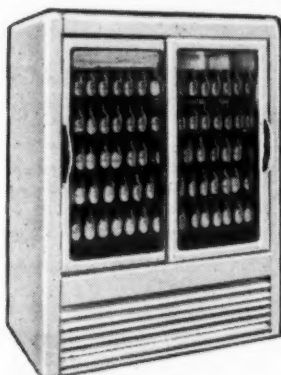
MODEL D-54 DAIRY PRODUCTS MERCHANDISER. Forced air cooling is rapid, uniform and dry. Self-defrosting. Shelf superstructure for related products. Capacity 9 Cu. Ft. Slimline lighting in superstructure and display area. Overall height 58½". Length: 54½". Depth: 30"



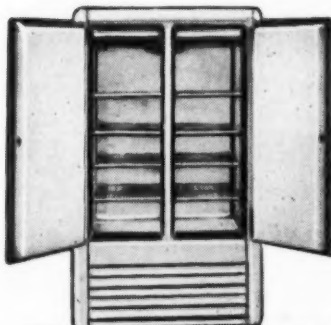
MODEL OF-17 M. OPEN TOP GLASS FRONT ICE CREAM MERCHANDISER WITH "SELL-MORE" SHELF. Capacity approx. 625 standard packages. Overall height: 58½". Length: 76". Depth: 30". Also available in 9 Cu. Ft. size.



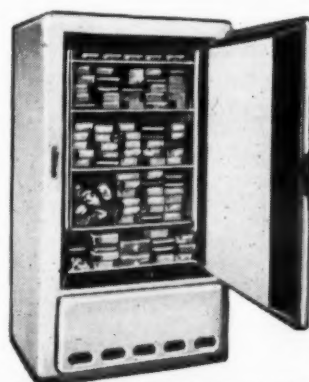
MODEL S-40-63 DRY BEVERAGE COOLER AND ALL-PURPOSE REFRIGERATOR. Also available in 4'6" and 8'1" sizes. Capacities: 12 to 37 cases of 12 oz. bottles. Remote and self-contained models.



MODEL WC-4½ ft. reach-in wall case for merchandising dairy products and bottled goods. Ceiling mounted, high velocity, high humidity blower coil. Height: 71¼". Length: 53". Depth: 33"



THE JORDON "ESTATE MODEL" W-16. Capacity 16 Cu. Ft. Height: 69". Length: 39". Depth: 29". Ceiling mounted blower coil gives greater storage space in small dimension cabinet.

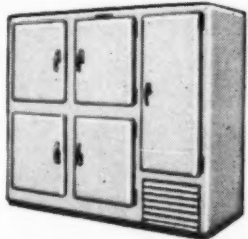


MODEL UF-15 UPRIGHT FREEZER. Occupies one half the space of similar capacity chest freezer. Heavy duty freezer plates provide safe, sub-zero temperature for freezing and storage. Standard equipment includes ice cube trays on special shelf.

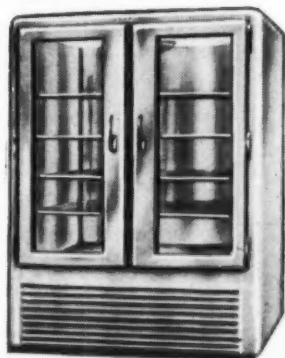
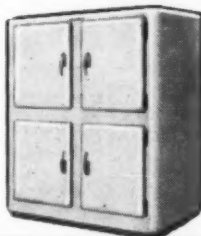


JORDON 2-TEMPERATURE REFRIGERATORS. Models that bridge the gap between the commercial and domestic market. ONE condensing unit. ONE simple control. MODEL JORDON 14/6. White enamel or stainless steel exterior. 6 Cu. Ft. freezer locker. 14 Cu. Ft. Normal refrigeration. Height: 71¼". Length: 43½". Depth: 33". JORDON MODEL 10/4. White enamel. 4 Cu. Ft. freezer locker. 10 Cu. Ft. Normal refrigeration. Height: 69". Length 39". Depth: 29"

MODEL SC60JFC REACH-IN REFRIGERATOR. Two, high humidity, ceiling mounted coils. Available with meat hooks behind long door. Height: 71¼". Length: 83". Depth: 33"



MODEL R42 REACH-IN REFRIGERATOR. For remote operation. Available with high humidity coil or as an ice maker. Height: 71¼". Length: 60¾". Depth: 33". Solid or glass doors as required.



MODEL SC30G WITH THERMO-PANE GLASS DOORS. (Also available with solid doors.) High humidity blower coil, ceiling mounted. Capacity 30 Cu. Ft. Height: 71¼". Length: 43½". Depth: 33". . . . Also available in 23 Cu. Ft. (43½" long)



The MODERN JORDON 150,000 square foot plant, Phila. 43, Pa.

# JORDON

58th & Grays Avenue  
Philadelphia 43, Pa.

Exclusive Export Distributor—Joseph Miller, 11 Broadway, New York City 4, N.Y. • Cable: JOMILLER





"Impartial test data proved of interest to all branches of the industry and the buying public as well."

## University of Wisconsin Tests Furnish Household Electric Refrigerator Performance Data

Tests Show Current Consumption and Temperatures Maintained Under Various Conditions

"Largest single order for household refrigerators evoked keen competition among bidders and revealed individual claims on operating costs."

## Westinghouse Proposal Ranks No. 1 in Bidding on 16,697 Refrigerators for Government Housing Projects

Annual Operating Cost Guarantee May Be Challenged

WASHINGTON, D. C.—With a combination of unit price and guaranteed operating cost as the basis of selection, Westinghouse Electric Mfg. Co. is low bidder among the eight manufacturers submitting bids to the Housing Division of the Federal Emergency Administration of Public Works for furnishing electric refrigerators for 34 housing projects.

On a combination of the two factors, unit price and operating cost, Westinghouse's kwh. guarantee of 1.32 gave it a power cost for the 10-year period of only \$48.18, and the lowest evaluated bid in both classifications.

## CUTLER-HAMMER DEVELOPS NEW LINE OF COMMERCIAL REFRIGERATION CONTROLS

"In the long-pull, Dr. Mills may still be proved right, but the summer of 1951, except in Dallas, wasn't so hot."

## Dr. Mills Cites Need For Air Conditioning In United States

CINCINNATI—From his studies on the relation of weather to human behavior, Dr. C. A. Mills, professor of experimental medicine at the University of Cincinnati, declared recently that the world is getting warmer and the United States may become a country of quick-tempered, semi-tropical, emotional people with low energy, if the trend of gradually rising temperature, which he has traced down from 1850 continues.

# 1936



"Officially recognized performance data on commercial condensing units becomes available."

## UNITS RATED BY STANDARD TESTS NOW 'CERTIFIED'

Manufacturers Place Rating Data on File With Associations

DETROIT—Ratings evolved from tests of commercial refrigerating machines made in accordance with the requirements of the American Society of Refrigerating Engineers "Standard Method of Rating and Testing Mechanical Condensing Units" approved last year (the complete text of which was published in the Nov. 6 and 13, 1935 issues of ELECTRIC REFRIGERATION NEWS), are being certified by manufacturers to the Refrigeration Division of Nema or to the Refrigerating Machinery Association.



"Importance of air conditioning in improving the health and efficiency of office workers gains recognition."

## Air Conditioning Cuts Losses for Illness In Office 27%

SAN ANTONIO, Tex.—Installation of air conditioning effected a reduction of 27% in time lost to illness in the insurance offices of the United Service Automobile Association, reports of the company for a 12-months' period show.

## Utility Sales Engineer Believes That Home Air Conditioning Will Be Priced As Low as \$100

"If you allow for the inflation of monetary values during the past 15 years, the air conditioning industry has come mighty close to the figure mentioned."



One of the first self-contained store air conditioners was introduced by Chrysler Airtemp in 1936.

## Airtemp Exhibits Self-Contained Conditioner

DAYTON—A self-contained air conditioning unit in new design in which all machinery, including compressor, motor, condenser, and cooling coils is contained in one cabinet, recently was introduced by Airtemp, Inc., Chrysler Corp. subsidiary here.

Shown for the first time at the National Hotel Show in Grand Central Palace, New York City, the new unit is of 3-hp. capacity, occupies only 20 by 33 in. of floor space, and stands 7 ft. 6 in. high. Its compactness is made possible through use of a new reciprocating type radial compressor, so designed that it can be suspended on rubber mounting in the base of the cabinet.

## Manufacturer of Airtemp Units Goes to Dayton

## LIPMAN BUILDS CONDITIONER TO COOL AIRPLANES WHILE STOPPING AT AIRPORT

## LAUER ELECTED YORK VICE PRESIDENT



"Proponents of the older method of food preservation did not give up the fight easily."

## Scientists' Testimony at Federal Hearing Discredits Claims Made In Coolerator's Ice Box Booklet

Assertions that Electric Refrigeration Injures Food Called False; Grunow Advertisement Entered as Evidence



"Proper balancing of an air conditioning system is an essential factor in successful operation."

## Hertzler Analyzes Application Factors Affecting Selection of Air Conditioning Equipment

An analysis of the actual conditions of operation which a refrigerating system should be designed to meet when installed for comfort cooling, and new considerations in the establishment of a basis for the proper balancing and selection of compressor, condenser, and evaporator, were presented by John R. Hertzler, manager of the air-conditioning division of York Ice Machinery Corp., before the American Society of Refrigerating Engineers and the American Society of Heating & Ventilating Engineers at the joint session which these two societies held during their recent annual conventions.

"There was little hint here of the widespread use to which glass filters would ultimately find in the field."

## New Process Used In Glass Filter Making

NEWARK, Ohio—Glass air filters, for use in ventilating and air conditioning systems, have been developed by the industrial materials division of Owens-Illinois Glass Co.

ST. LOUIS—George Green, sales engineer with Union Electric Light & Power Co., believes that the real strides in residential air conditioning will be made when manufacturers introduce room coolers which can be retailed for somewhere around \$100.



"That bit about Russia has a familiar ring by now."

## POLITICAL DIFFERENCES MAR WORLD REFRIGERATION CONGRESS PROGRAM

By George F. Taubeneck

THE HAGUE, Holland—Dramatic withdrawals of the Italian and Russian delegations by Dictators Mussolini and Stalin, plus ringing pleas for international peace and accord delivered at the final banquet by the chairman of the German and British delegations, introduced international politics into the Seventh International Congress of Refrigeration, in convention here from June 16 through June 27.

Mussolini recalled the Italian delegation as a protest against the continuance of sanctions, serving notice that Italy would take part in no international movements of conventions until sanctions are formally lifted.

From Leningrad came unofficial word that the Russian delegation was kept home because of diplomatic impasse existing between Holland and the U.S.S.R.

"Financing of sales has long been a problem in the commercial field."

## Commercial Manufacturers Favor Shorter Financing Terms

'Easy Payment' & 'Low Cost Financing' Plans Attacked By Association

CHICAGO—Members of Commercial Refrigerator Manufacturers Association took a strong stand against "easy payments" and "low-cost financing" at their annual meeting here June 19 and 20.

Continuation of the principle of small down payments, or none at all, and extension of the credit period to 36 months, permitted under the plans offered by various finance companies, was held to be economically wrong. In the long run, it was held, this practice would rob the industry of the stabilization it has achieved during the depression years.

"Throughout the early 30's, the manufacturer mentioned here drew criticism from the industry and the NEWS for its advertising policies."

## The 'Fear Appeal' In Advertising

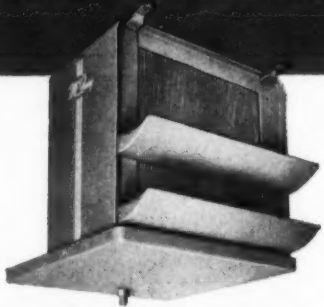
Grunow is at it again! Last year we thought that he had definitely decided to discontinue the emphasis upon the refrigerant in his advertising.

When we received the proof of the Grunow advertisement, which appears in this issue, we had a distinct feeling of disappointment. Frankly we hate to see Grunow use that kind of copy and we sincerely dislike the idea of its appearance in the NEWS.

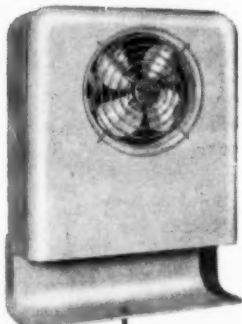
On checking up we found that the Grunow advertising account has recently changed hands. This advertisement is the first one from the new agency—Ruthrauff & Ryan of Chicago.

This advertising agency is an old and highly successful concern. They should know good advertising and selling methods and there is no reason why we should attempt to advise them on how to run their business.

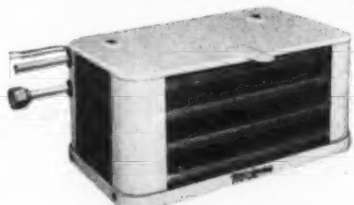
# McQuay UNIT COOLERS



Pacemaker Unit Cooler. Designed to provide efficient "low sides" for back bars, novelty boxes, walk-in coolers, reach-in cabinets, etc. where fixture temperatures above 35° are required.



Panel Chiller. Designed and engineered for wall mounting to provide peak performance and ease of installation. For reach-in cabinets, beverage coolers, back bars and small walk-in coolers. For applications above 35° F.



Two Way Unit Cooler. Features compactness with efficiency for direct draw bars, back bars and reach-in refrigerators for temperatures above 35° F. In two sizes, 90 and 135 B.T.U. (Basic refrigeration rating.)

# Compare... and be convinced!

## "McQUAY UNITS DO A BETTER JOB!"

By every standard—styling and engineering design, rugged construction, efficient performance—McQuay Unit Coolers invite comparison.

Compare—and you'll select a unit cooler from the McQuay line featuring Ripple-Fin Coils with hydraulically expanded tubes. There's a McQuay Unit Cooler of the type and size to fit your specific requirements . . . to do a better refrigeration job.



Radial Unit Cooler. Designed for refrigeration in Walk-in Coolers, Florist Boxes and other applications above 35° F. Also for economical comfort cooling in small offices and shops. Allows maximum head room. Uniformly distributes air over a semi-circular area. In seven sizes from 200 to 870 B.T.U. (Basic refrigeration rating.) Nominal comfort cooling rating ¾ to 3 tons.

Consult the McQuay Representative in your city today or write directly to McQuay, Inc., 1607 N. E. Broadway, Minneapolis 13, Minnesota.

# McQuay INC.

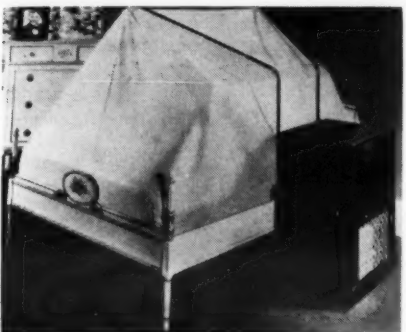
HEATING • AIR CONDITIONING • REFRIGERATION







"New addition to America's comfort" in 1936 was Crosley's bed air conditioning unit, consisting of tent-like canopy that fitted snugly over any bed and conditioner that cleaned, humidified, and cooled air circulated beneath canopy. Price: Less than \$100.



"Just how profitable were refrigerators for a department store? Executives may want to compare the figures here with today's."

## Ralph Cameron Declares Survey Shows Department Store's Profit On Refrigerators Averages 4.8%

CLEVELAND—Figures compiled from questionnaires sent to department stores by Ralph C. Cameron, assistant sales manager for General Electric kitchen appliances, shows that department stores make a profit of 4.8% on their electric refrigerator business.

The profit of 4.8% noted is the average of the 25 department stores reporting. Their figures averaged a gross margin in relation to sales of 34.8%. In addition, they had a sundry income consisting of profits in financing of 2.4%. Inasmuch as this was produced by the investment, it is added to the gross margin to make a total of 37.2%.

The total operating expenses for the 25 stores average 32.4%, so that by simple subtraction, the profit of 4.8% is arrived at.

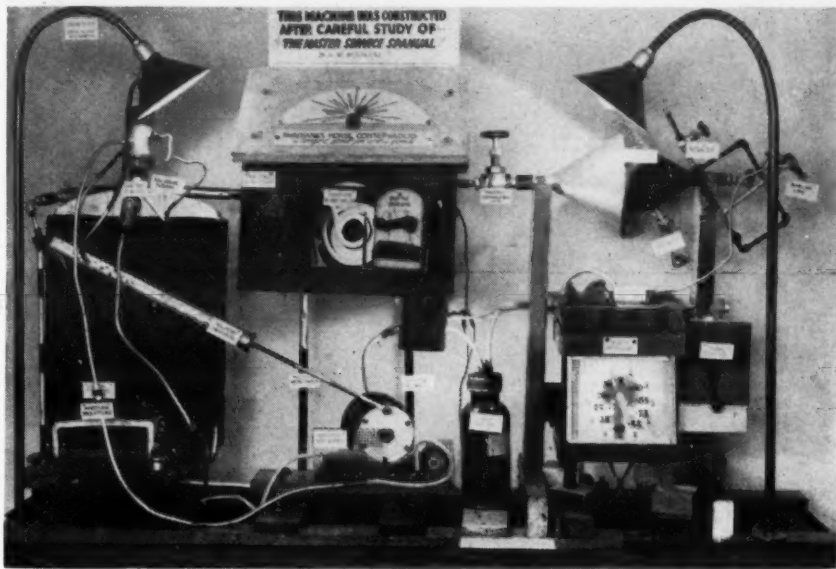
"Scope of applications for refrigeration is almost limitless, provided the industry keeps fishing around for them."

### A New Use—To Keep Minnows Cool—Found For Refrigeration

KANSAS CITY—Discovery of new application for refrigeration, stumbled upon during the blistering July heat wave, is claimed by N. Baraban, head of the Copeland Refrigeration Co. of Kansas City, a distributing outlet.

During the hot spell, Baraban relates, fishing in the area surrounding Kansas City was practically brought to a standstill because fishermen were unable to secure bait. The shortage of minnows, it was discovered, was due to the fact that places selling live minnows were unable to keep them alive.

Baraban was called in as a consultant on the problem by anxious fishermen, and suggested that the water in which the minnows were kept be cooled.



Those industry veterans who attended the 1936 R.S.E.S. convention and refrigeration parts and supplies show at Memphis will probably remember most vividly (1) the hotel where the show was held, the Gayoso (built before the Civil War); (2) the "after hours" special show for the conventionites at a Beale Street theater; (3) the Ansul Chemical Co. exhibit, which we described as being "In the nature of a service engineer's nightmare come to life."

The exhibit burlesqued well-known industry products and advised, "When Refrigeration Goes to the Dogs, Let the Ansul Twins Help You." The machine displayed consisted of a refrigeration system built, the sign said, after careful study of "The Master Service Manual," by K. M. Hookem." The dog-house was a "Fairbanks Horse Conservadog," supported by the "Hellvinator Low Temp Foundation." Bone and dog biscuit were hung on the door in a "Cross Pile Self-More." Operated by a "General Eccentric" motor, the "Hellhog Compressor," driven by a "Dey-ton Weebell," forced liquid through "Bull-verine Tubing" to a "Chief-Too-Come-See" radiator, out again through tubing with "Impeerless Brass Fittings" into a "Liquid Deceiver," and then into a "Wetrite Dryass Sahara" dryer, while the "Mighty Meter Liar" spun 'round and 'round. Switch was a "Rank Control" and "No Care Test" and "Henry VIII" valves were used, separated by an "American Rejector" strainer. Lighting effects were furnished by "Mickey and Minnie Westinghouse."



"After running serially in the NEWS, these excellent service articles were made available to the thousands that had been waiting to get them in book form."

## The Master Service Manual-- Just Off the Press--

Tells What to Do and Shows How to Do It

"To bring some order out of the chaos in instalment terms on commercial refrigerators, manufacturers decided to offer specific suggestions to dealers."

### SERVICE CHARGE SCALE ADOPTED ON TIME SALES

CHICAGO—Leading manufacturers of commercial refrigerators (display cases, store refrigerators, etc.) are now furnishing their dealers with a schedule of service charges on a 6% basis for deferred sales of commercial refrigerators, according to reports received by Paul Sullivan, secretary of the Commercial Refrigerator Manufacturers Association.

Effort to standardize more or less on some uniform basis for credit sales pressed at a meeting of the manufacturers in June (reported in the July 1 issue of the NEWS) in which "easy payment" financing was vigorously attacked.



"Through the years, most valves returned to the manufacturer because of alleged 'defects' have been found perfectly okay."

### New Guarantees Announced by Valve Makers

DETROIT—Revised guarantee and replacement plans, covering their automatic and thermostatic expansion valves, have been made effective this month by two valve manufacturers, Detroit Lubricator Co. and American Injector Co.

Details of the guarantee policies are similar. Valves are guaranteed for one year of field operation against defects in material and workmanship. The "warranty" period covers 18 months, the additional six months allowing for floating time in the factory as well as on jobber shelves.



"Dealers needed guidance on the new problem of trade-ins, which in themselves were prime evidence of the tremendous gains made by the industry."

## Indianapolis Dealer Relates Growth of Replacement Market; Needs Standard Trade-in Values Established

H. A. Shaffer, veteran refrigeration merchandiser who handles the well-to-do "north side" of Indianapolis for Frigidaire thinks that it won't be long until the household side of the industry, like the automobile trade, needs a "blue book" to regulate prices on trade-ins.

"An awful lot of our sales this year have involved taking in used electric refrigerators," Shaffer said. "It's a new business for us, and there are no previous standards by which we can arrive at a price which we believe is fair both to us and the customer."

"Codes that would permit uniformity in testing and rating of equipment were coming into being."

### ASRE APPROVAL GIVEN CODES FOR RATING, TESTING

NEW YORK CITY—Giving final approval to two codes for rating and testing refrigeration and air conditioning equipment, listening attentively to a full three-day program of technical papers, and electing officers for the coming year, members of the American Society of Refrigerating Engineers concluded their annual meeting here last Friday at the Hotel Pennsylvania.



"At this stage of the game, the parts wholesalers were still working out their problems, chief of which was to arrive at a clear definition of the term 'jobber.'"

### Parts Wholesalers Seek Cooperation on Proper Margins, Resale Prices

MEMPHIS, Tenn.—Setting up new qualifications for membership and coordinating viewpoints on pricing and other trade practices, representatives of nearly 60 refrigeration supply and parts jobbers met here in their second annual convention.

The new requirement of eligibility for membership in the association makes it mandatory that the jobber stock at least 75% of the following:

1. Copper tubing, hard and soft.
2. Refrigeration valves and fittings.
3. Accessories.
4. Refrigeration valves and fittings.
5. Belts and pulleys.
6. Expansion valves.
7. Controls.
8. Gaskets.
9. Tools.
10. Gauges and thermometers.
11. Filters and dehydrators.
12. Evaporators and condensers.

# "COMPLAINTS and RETURNS ALMOST ZERO

on  
**KELVINATOR**  
Condensing  
Units through  
18 years!"

says A. D. Enns  
of Los Angeles

Profit by the experience of Mr. Enns—think of his letter when you are selecting equipment for your next installation or replacement job. See the complete range of unit sizes . . . and complete line of refrigeration parts and supplies, competitively priced . . . at

your nearest Kelvinator Parts Depot. Write, phone, or stop in for helpful information on installation or service problems. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

KELVINATOR  
TEMPRITE  
LEONARD



Phone: VAndike 6031  
VAndike 5053  
Night: VAndike 5533

Southern California Refrigeration Co.  
1338 EAST SIXTH STREET  
LOS ANGELES 31, CALIF.

May 28, 1951

Nash-Kelvinator Corporation,  
14250 Plymouth Road,  
Detroit 32, Michigan

Gentlemen:

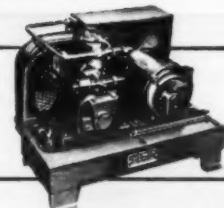
We've been selling and installing Kelvinator parts and commercial condensing units (both sealed and open type) for the past 18 years.

Our success in the refrigeration business is due largely to the fact that we "sell satisfaction" by selling only dependable, trouble-free merchandise. Your commercial condensing units are all you claim them to be. Unit returns and complaints from our customers are almost zero.

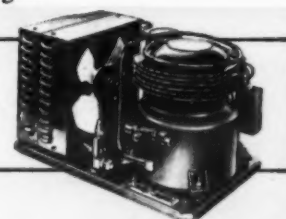
Yours very truly,

So. Calif. Refrigeration Co.

*A. D. Enns*  
A. D. Enns



See the complete range of Kelvinator open-type condensing units—from 1/4 H.P. to 5 H.P.

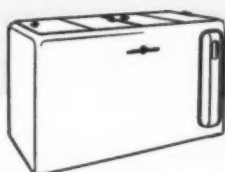


See the selection of 12 Kelvinator Hermetic models, up to and including 1/2 H.P.

PROFIT TODAY... BUILD FOR TOMORROW WITH

# Kelvinator

THE NAME THAT SELLS... THE NAME THAT SATISFIES!



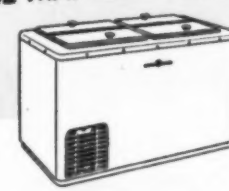
KELVINATOR  
BEVERAGE COOLERS



KELVINATOR FROZEN  
FOOD MERCHANDISERS



KELVINATOR  
WATER COOLERS

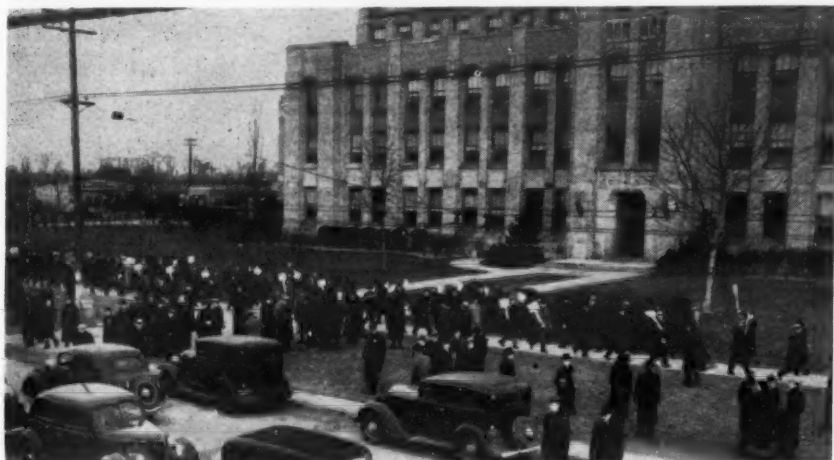


KELVINATOR  
ICE CREAM CABINETS



KELVINATOR  
AIR DRIERS





"Sit-Down" strikes were raising hell with industry in 1937. At Nash-Kelvinator's main plant on Plymouth Rd. in Detroit the sit-downers were resorting to picketing also to prevent even administrators from doing their work.



"Reported in detail in the NEWS were the long Federal Trade Commission hearings which served to dispel the injurious propaganda directed against mechanical refrigeration."

## At Last! An Official Refutation of Claims Made Against Mechanical Refrigeration

Is there a greater dehydration of foodstuffs in a mechanical refrigerator than there is in a non-mechanical refrigerator? Is 45 to 50° F. detrimental to foods? Does the water in ice cube trays absorb gases or food odors that may possibly form inside the refrigerator?

But it is the FTC's findings of facts in this case that are really important to the mechanical refrigeration industry, for they will go a long way in putting to rest forever the ungrounded claims made against mechanical refrigerators. You'll find these "findings as to fact" published on pages 6, 7, and 8 of this issue, along with the text of the FTC "cease and desist" order.

"Enough used mechanical refrigerators were being taken as trade-ins by 1937 to warrant some activity in reconditioning operations."

"More-and-more dealers and contractors were searching for the 'how' of selling air conditioning properly."

## 'Remanufactured' Box Demand Evidenced by Rising Activity at Federal Refrigerator's Factory

NEW YORK CITY—Evidence of the rising domestic and foreign demand for remanufactured mechanical refrigerators is found in the busy factory of Federal Refrigerator Corp. at 57 East 25th St. here, where last year approximately 3,000 used boxes of 1930-1936 vintage were remanufactured for American department stores and for the company's distributorships in foreign countries.

MANSFIELD—The most important service an air conditioning distributor can offer the large buyer is a well-rounded group of specialists trained in the art of air conditioning, refrigeration, and automatic control, who know how to balance first cost and operating costs so that the best possible results are obtained from any type of installation. A. C. Buensod, president of Buensod-Stacey Air Conditioning, Inc., told Westinghouse air-conditioning distributors at their recent meeting.

## Dealer's Best Service to Large Purchaser Is Corps of Air Conditioning Specialists, Buensod Tells Westinghouse Group

"Decision was made by the manufacturers' group now known as REMA to sponsor an All-Industry Exposition, and the show of that name continued over the years. (Next one: Nov. 5-8 in Chicago, this year.)"

## Manufacturers of Parts Decide To Sponsor 1938 Exhibition; Jobbers Discuss Distribution

CHICAGO—A decision to have the association sponsor its own trade show, and the approval of a number of significant changes in the association's by-laws, were the chief accomplishments at the annual meeting of the Refrigeration Supplies and Parts Manufacturers' Association.

"Big growth in the field installations of air conditioning and refrigeration equipment brought squabbles among some union elements on the matter of who was to handle the installation work."

## Wisconsin Ruling Says Plumber Can't Install

MILWAUKEE—The state board of health has intervened to settle a jurisdictional dispute between plumbers and steamfitters on installation of air-conditioning and refrigeration equipment. The question, "Where does plumbing end and steamfitting begin?" has been argued by union members of both crafts and contractors before the common council's utilities and health committee many times.

The board's ruling gives licensed plumbers jurisdiction over water piping up to the point where the appliance, whether air conditioning, refrigeration, a boiler, or heating system, is to be installed, from which point it is the steamfitter's work.

"Mr. Salesman, if you think you have tough working conditions, look what these poor devils were asking for. They wanted 6 p.m. closing hours three nights a week."

## SALESMEN SEEK CLOSING HOURS AT MILWAUKEE

MILWAUKEE—A tentative plan under which the retail appliance salesman's union would ask retail appliance stores to sign agreements calling for the stores to close at 6 o'clock on Tuesday, Wednesday, and Saturday nights, has been agreed upon by union representatives and an informal committee of appliance dealers.



"Refrigerators were well beyond the stage of being capable of classification as a dangerous piece of household equipment and courts were taking cognizance of this fact."

## Court Rules That 'Mechanical Refrigerators Are Not Dangerous' In Deciding Damage Suit

"Trade-ins were presenting a problem in commercial refrigeration too, and various solutions were attempted, but the problem continues today."

## C.R.M.A. PLANS 'BLUE BOOK' ON OBSOLETE UNITS

CHICAGO — In two significant moves, members of the Commercial Refrigerator Manufacturers' Association at their annual meeting here Aug. 9 and 10 voted support of the movement toward shorter time payment terms, and adopted a plan designed to discourage excessive trade-in allowances on used commercial equipment.

"Early agreements under Fair Trade laws even covered trade-in allowances."

## 10% On Trade-Ins Is Maximum Under New Price Agreement

NEW YORK CITY—First price-fixing agreement on major appliances in the New York area under the Feld-Crawford act, reached last week on Maytag washers with Sheppard Warehouses as signer for the manufacturer's product, sets 10% as the maximum amount permitted for trade-in allowances, with retail salesmen bearing 5% of the price and the balance to be absorbed by the dealer.

"Indoor sports arenas were discovering that they might have year-round seasons if they installed air cooling."

## Hot Fights In Cool Comfort

Huge System Conditions Madison Square Arena

NEW YORK CITY—More than a mile of ductwork and nearly a score of fans are included in the year-round air-conditioning system installed by Airtemp, Inc., in Madison Square Garden, one of the world's largest and most noted indoor sport centers.

"1937 was the year of sitdown strikes. Kelvinator was the chief victim in the refrigeration industry. It hurt retail business too."

## Strike Tactics Close Offices at Kelvinator

Sitdowners Bar Doors, Use Violence; Service Dept. Votes Against Strike

DETROIT — The so-called "sit-down" strike at Kelvinator division of Nash-Kelvinator Corp.'s main plant on Plymouth Rd. here took its first turn toward violence Feb. 9 when strikers holding the plant and picketers forcibly prevented office workers and officials of the company from entering the plant when they reported at the Administration building this morning, the first time the office force has been stopped from functioning during the week-old strike.



force has been stopped from functioning during the week-old strike.

"Scientific investigations continued to demonstrate the benefits of air conditioning to human health and happiness."

## Experiments With Rats Demonstrate Benefits Of Air Conditioning

ST. LOUIS—Importance of air conditioning to healthful living is demonstrated in experiments with white rats just completed by the St. Louis Medical Society.

Selecting 20 pairs of rats, the society placed 10 pairs in an air-conditioned room, let the other 10 pairs live in ordinary St. Louis atmosphere.

Every rat subjected to the regular St. Louis atmosphere had grey, discolored lungs, blackened bronchial tubes, and carbon and other smoke by-product deposits on interior lung tissues. Rats living in air-conditioned quarters had normal, pink lungs, were fatter and sleeker, and raised healthier litters with fewer deaths.



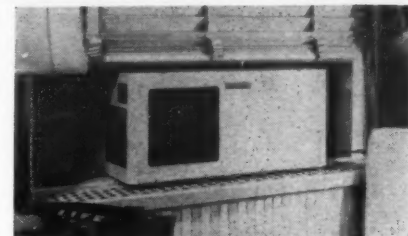
"The air conditioning field was refining and developing water conservation devices to meet charges of excessive water usage."

## Evaporative Condensers, Cooling Towers And Ponds, or 'Double Use' of Water Are Answers to Condensing Problems

Indianapolis May Limit Use Of Cooling Water

Chicago Lays New Water Mains To Handle Load For Conditioners

CHICAGO—To meet the increasing water demand of its downtown district, a large share of which is due to the growing use of air conditioning by business establishments, the city of Chicago is laying new 16-in. cast iron mains under State St.



This "Pleasantaire" window-type room cooler came on the market in 1937, one of the first room coolers to "sit" on the window.

"Department stores were continuing to complain about losing money selling refrigerators and other appliances."

## Specialty Sales Plan Needed, Say Dept. Store Heads

CHICAGO—"Typical" department stores lose money on their appliance departments. Those which maintain specialty selling organizations to push electrical appliances make money.

At the general session of the 1937 N.R.D.G.A., these conclusions were general.

## Flint Dealers Say 'Sitdown' Strikes Were Worse Than the Depression

FLINT, Mich.—Branded by one of the city's oldest dealers as the "worst thing that has ever happened to business in this town—worse than anything that happened during the depression," sit-down strikes in Flint's automobile plants have reduced a flourishing refrigeration and appliance business in a city of 165,000 to a virtual standstill, left deferred payment collections in the lurch, and have caused havoc in the operations.

## '38 Conditioning Lines To Feature Package Commercial Units

CHICAGO — Compact self-contained units for air-conditioning office suites and store rooms will be a feature of the 1938 manufacturing activity of the air-conditioning industry, it is intimated in a recent bulletin of the Air Conditioning Manufacturers' Association.

"Here's some interesting figures on how much electric power it took to operate a refrigerator in 1937."

## Low Running Cost of Modern Units Shown In Test

DETROIT — Substantial evidence that the average electric refrigerator and electric range of today, in normal use by a family of average size, consumes approximately 40% less current than its progenitors of a decade ago, is offered by C. R. Landrigan, assistant controller, Detroit Edison Co., in a comparison of results of year-long current-consumption tests, concluded by his company last fall, with results of a similar test which the utility made in 1928.

Whereas, the average modern refrigerator, these tests showed, consumes only 325 kwh. annually, the average refrigerator of 10 years ago ate up kilowatt hours at the rate of 542 per year. The average modern range, according to these surveys, uses 935 kwh. per year, while the annual kwh. consumption of the average range 10 years ago stood at 1,480.



Copeland Refrigeration Corp. had been operated by Dallas E. Winslow, colorful Detroit industrialist, for a few years in the middle thirties. Then in 1937 it was sold to a group of veteran refrigeration executives and engineers headed by Harry E. Thompson, and including Frank J. Gleason, Charles L. Curtis, and Oskar H. Buschmann. W. G. von Meyer, who had been a sales executive with Copeland for a number of years, continued on with the new organization, which in a few years time after the Thompson interests took hold, became one of the major producers of condensing units for the industry.

In this picture of the completion of negotiations for the purchase are (seated, left to right), E. C. Burr, Dallas Winslow, Harry Thompson, Charles Curtis; standing are Oskar Buschmann, W. G. von Meyer, F. B. McKaig, and Frank Gleason.

Congratulations to  
AIR CONDITIONING & REFRIGERATION NEWS  
on 25 years of service  
to a Great Industry

Syracuse, N. Y. CENTRAL SERVICE SUPPLY Scranton, Pa.

Serving the Industry Since 1937

MEMBER OF REFRIGERATION EQUIPMENT WHOLESALERS ASSOCIATION



"Some parties tried to get in under the air conditioning banner who didn't belong, and various agencies took steps to put them in their place."

### FTC AGAIN RULES ON CONDITIONER ADS

CHICAGO—Reiteration of the Federal Trade Commission's ruling that all appliances which do not meet its definition of air conditioning cannot be advertised as such has resulted in the entering into a stipulation between the Gaylord Mfg. Co. of this city and the commission that the Gaylord firm will discontinue "unfair" advertising practices in promotion of its device known as the "Fresh'nd-Aire."

The words 'Air Conditioning' signify the control by a mechanical device of the temperature, humidity, and circulation of the air in rooms, buildings, and railroad passenger trains; and the non-performance of any one or more of these functions takes a device out of the class of air conditioners, according to the understanding of the trade and the purchasing public.

### New York 'Times' Ruling Limits Use of Term 'Air Conditioned'

The New York Times, according to Louis S. Berger, display classified manager, has set up a three-fold set of definitions to which air-conditioning equipment used by advertisers must conform before his paper will allow advertising statements to the effect that the establishment is "air conditioned."

These are: The theater, restaurant, or other places of business must possess equipment which (1) warms or cools the air; (2) humidifies or dehumidifies the air; and (3) circulates the air.

"Gathering war clouds were putting stories like this into the NEWS."

### WAR DEPARTMENT ASKS FOR REFRIGERATION BIDS AT WRIGHT FIELD

### Air Conditioning Cited as Cities' Defense Against Wartime Gas Attacks

WASHINGTON, D. C.—Air conditioning was held out as hope of the modern city against possible wartime poison gas attacks in a report of the National Resources Committee presented to President Franklin D. Roosevelt July 22.

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

#### INLAND INTRODUCES NEW FAST FREEZING, EASY RELEASE CUBE TRAY

Modern Equipment Co. Announces Line of 6 Commercial Models

DEFIANCE, Ohio—The Modern Equipment Corp. of this city is introducing, as its first products for the refrigeration field, a line of commercial refrigeration compressors, in a complete range of high sides from 1/4 to 10 hp., which will be marketed under the trade name "Par."

#### NEW KOCH PLANT TO UP PRODUCTION ON COMMERCIAL LINE

Sealed Condensing Unit Adopted for First Time By Kelvinator

DETROIT—At private previews being held this month Kelvinator dealers are getting their first look at the 1938 Kelvinator Household refrigerator, which is distinguished by the incorporation of the new hermetically sealed "polar power" condensing unit, marking the first time a Kelvinator household model has been equipped with a sealed machine.

#### D. EDDINS HEADS AIRTEMP; RADIAL UNIT INTRODUCED



Locker plants were becoming more plentiful by 1937. Patrons were becoming accustomed to walking into cold rooms for frozen food stored in their lockers. This plant at Clayton, Mo. provided coats for their customers.



"This dealer had a real jazzed-up store promotion program, and we'll bet he drew a lot of prospects."

### Good 'Eats', Free Handkerchiefs, and Highest-Bidder Sales Mark Topeka Norge Dealer's Jubilee Week

TOPEKA, Kan.—Good things to eat, free handkerchiefs, a highest-bidder sale of five major appliances, and a prize letter contest were among the features of a recent jubilee sale held by Ackerman-Brock.

Refrigerator and range combinations included the serving to prospects of frozen desserts, peanut butter and orange cookies.

To draw interest in the laundry equipment, 500 white and fast-color handkerchiefs were purchased and a few dozen at a time put into a washing machine. Then the current was turned on and the gay bits of color set swirling. Prospects were invited to fish out a handkerchief with the stick provided, run it through the

"A new kind of air cleaning device for use in air conditioning came along in 1937."

### Electric Air Cleaner Aids In Treating Hay Fever Cases

CHICAGO—An electric air cleaner, which is finding successful use in treating cases of hay fever and asthma, as well as is winter air conditioning in cities where soft coal is used as fuel, was described to Edison Electric Institute members by Dr. L. W. Chubb, director of research for Westinghouse Electric & Mfg. Co.

### Berg To Aid von Meyer on Copeland Sales

### FRIGIDAIRE TO ENTER GENERAL APPLIANCE FIELD

Ranges, Washing Machines To Be Introduced Soon, Biechler Announces

### Tyler Purchases Dry-Kold Plant; Plans Expansion

NILES, Mich.—Tyler Fixture Corp., manufacturer of commercial refrigerators and all-steel fixtures for food stores, has bought the former Dry-Kold Refrigerator Co.'s plant here. Announcement of the acquisition was made by Jerry Tyler, president and general manager of the fixture company.

### SERVEL PREPARES TO SUPPLY PARTS THROUGH JOBBERS

### Tranter Heads Kold-Hold

LANSING, Mich.—J. R. Tranter, president and general manager of the company, who purchased the controlling interest in Kold-Hold in June of this year, has superseded W. G. Farnsworth as general manager in taking over active control of the company's affairs.

Frigidaire Producing Electric Range Line



"Locker storage plants began to bloom all over the Midwest and Northwest parts of the country, opening up a new market, and attracting the interest of dealers and engineers."

### Development and Present Applications Of Rural Storage Lockers Outlined By Roger Sprague of Baker Co.

FRENCH LICK, Ind.—The development, design, and application of "rural storage lockers" were outlined in a paper prepared for the A.S.R.E. convention here by Roger Sprague of Baker Ice Machine Co.

According to Sprague's paper, the now extensive practice of cold storage locker plants had its origin in Centralia, Wash., in 1917, though at that time separate compartments for individual customers were not provided. It came about that many friends prevailed upon a Mr. Winchell, an ice plant owner, to store their domestic meats and wild game, so that they could enjoy the advantages of game and of quantity buying after the closed season.

"Refrigerated fixtures for merchandising vegetables were gaining acceptance in retail food stores."

### Sherer-Gillett Produce Case Installed for Detroit Market

DETROIT—One of the first local installations of Sherer-Gillett Co.'s new "Vegetaire" refrigerated produce cases was made recently by the Refrigeration Sales Corp., Detroit representative of the Marshall, Mich. display equipment manufacturer, in the market of J. T. Assemany and B. Howard.

### FARMERS ESTABLISH COLD STORAGE LOCKER SYSTEM DESPITE OPPOSITION

AMBOY, Ill.—Farmers of Lee county, through the medium of their own Farm Bureau, overrode opposition of the state's farm leader in promotion and sponsoring the cooperative community locker plant here for cold storage of all perishable farm produce.

Following an inspection trip of similar locker projects in northwestern Iowa, the bureau set up a committee to promote the local plant. Construction work was begun last November, and the 220-locker 10-ton plant, operated by a York 4 x 4-inch ammonia compressor, was completed the following month. An additional 110 lockers were added in March of this year.

"An analysis of convenience features was an added feature to publication of specifications in 1937, but the manufacturers weren't too happy about it."

### Analysis of Convenience Features Included as Standard Equipment in 1937 Household Refrigerators



### TO REFRIGERATION CONTROL PROBLEMS!

Tough defrosting job? Water-cooled jobs that are "mean" to handle? Want to control multiple refrigeration systems with one switch...or control polyphase motors without line starters? The answer to these and other control problems is...PENN.

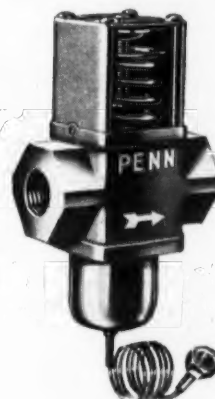
Yes...just like in most other products...there is also a big difference in automatic controls. And once you try PENN controls you'll learn that their performance on the job is the strongest recommendation for using PENN on every commercial refrigeration system.

In the complete PENN line, there is a type and model to fit your exact needs...a few types are illustrated here, there are many more. Take the first step in trying these better controls. Get your free copy of PENN's condensed catalog and price list. Ask your wholesaler or write Penn Electric Switch Co., Goshen, Ind. Export Division: 13 E. 40th Street, New York 16, U.S.A. In Canada: Penn Controls, Ltd., Toronto, Ont.

"serving the refrigeration industry since 1926"



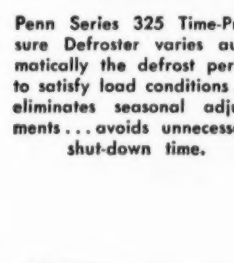
Penn Magnetic Line Starters are built in NEMA Sizes 0, 1 and 1½ and are available as open-type models for control panels or with General Purpose enclosures.



Series 246 Water Valves, zoned to keep water out of sliding parts, are built in threaded and flanged styles for all refrigerants and in sizes from 1/8" to 2 1/2".



Series 275 Oil Protection Control with built-in Time Delay Switch for pressure-lubricated compressors prevents damage from low or slow pickup of oil pressure.



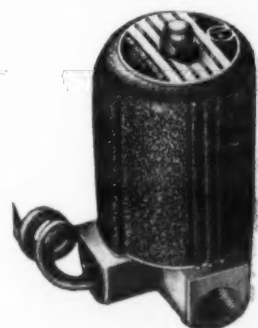
Penn Series 325 Time-Pressure Defroster varies automatically the defrost period to satisfy load conditions...eliminates seasonal adjustments...avoids unnecessary shut-down time.



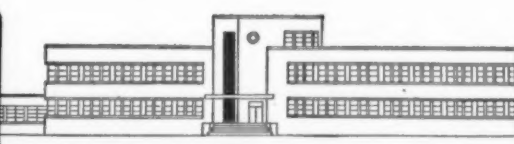
Penn Series 270 temperature and pressure controls have 2-pole construction and a direct reading calibrated scale which shows both cut-in and cut-out points.



Penn Series 221 Solenoid Valves are direct acting and may be used with all non-corrosive refrigerants as well as for water, oil or air.



**PENN**



**AUTOMATIC CONTROLS**

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES





Herman Goldberg, president of Standard Refrigeration Co., and strong advocate of an all-industry exposition, points to NEWS cartoon depicting various groups which were to gather at Stevens hotel, Chicago, for first industry show.



"It was largely through the efforts of the NEWS that the parts and supplies group was inspired and encouraged to stage the first All-Industry Show."

### Refrigeration Parts & Supplies Association Selects Stevens Hotel, Chicago, as Site for All-Industry Exposition, Jan. 17-19, 1939

CHICAGO—Members of the refrigeration parts & supplies association have decided to invite all branches of the refrigeration and air-conditioning industry to attend the first annual exposition to be held under their sponsorship and selected the place and dates as follows: Stevens hotel, Chicago, Jan. 17-19, 1939.

"Appliance dealers raised objections and tried to point out the 'facts of life' to the New Deal."

### DEALERS AT PRESIDENT'S MEETING ASK HANDS OFF INSTALLMENT SELLING

Tell Roosevelt It Will Be Means  
For Return of Mass Purchasing

"Adoption of a code to define comfort cooling was a step in the right direction to bring uniformity into air conditioning. The definition of comfort, however, is one that's still debated by engineers."

### ENGINEER GROUPS ADOPT COMFORT STANDARD CODE

NEW YORK CITY—March 28—A "Code of Minimum Requirements for Comfort Air Conditioning," just adopted by the American Society of Heating and Ventilating Engineers, and developed jointly with the American Society of Refrigerating Engineers, has set aside a uniform procedure for establishing the primary basis for the design of comfort conditioning installations.

For winter air conditioning, 70° indoor temperature with 35% relative humidity, when outdoor temperature is 30°, is set as a minimum design standard.

For summer air conditioning, an indoor design schedule of "effective temperatures" (which are indexes of comfort based on a combination of temperature, relative humidity, and air motion) is established ranging from 71° "effective temperature" when it is 80° outside to 75.5° "effective temperature" when it is 105° outdoors.



"Not only did this series in the NEWS give servicemen and contractors help on soda fountains and ice cream cabinets but it spread knowledge of a field that was to become increasingly important—low temperature refrigeration."

### Here Is First Article of Series On Soda Fountain & Ice Cream Cabinet Servicing

By Arch Black and Dean C. Seitz

"The story under this headline indicated that refrigeration equipment for the retailer was receiving more attention than ever before at the Dairy Exposition."

### SEALED ICE CREAM UNIT, FROZEN FOODS CASES FEATURE DAIRY EXHIBITS

"Engineering is still an important cost factor in air conditioning, but the increasingly widespread use of package units has reduced installation costs."

"Recognition by the courts that air conditioning could be counted upon to improve a business and add value to a building was an important gain for the industry."

### R. N. Trane Argues for Continued Education of Contractor In Engineering Principles

It is extremely essential that the air-conditioning industry as a whole educate the contractor to operate profitably. Within the physical limitations of its operating area, such a solidly grounded firm should have every opportunity for increasing sales and making progress with all types of mechanical equipment.

Many people are inclined to view air conditioning as a relatively new art and believe that the cost of complete air conditioning will be greatly reduced as time goes on. I do not think this is correct. In the first place, air conditioning is new only to the vast majority. Through education it will become familiar to all the proper trade channels.

No great reduction in cost can be effected in complete air conditioning because the greater portion of the expense of such a system is comprised of skilled labor—steamfitting, sheet metal work, cutting and patching, electrical work, etc., and the trend of skilled labor's wages certainly is not down.

The actual cost of the equipment itself is only a limited percentage of the whole. As far as I can see, the only appreciable saving that can possibly be effected will be through the rise of good contractors in each community throughout the nation who are in a position to undertake the installation of a complete job.

R. N. TRANE, President

"Locker plants offered a big market for commercial refrigeration, so to help the industry cash in, the NEWS presented detailed sales and engineering data on actual jobs."

### FACTORS IN REFRIGERATION LOAD CALCULATION FOR LOCKER STORAGE JOB

"Besides permitting close control of industrial processes and providing year-round comfort, air conditioning was found of definite value on the medical front."

### Air Control Lessens Hospital Deaths, Records Show

BROOKLINE, Mass.—Air conditioning would seem to have proven itself a "lifesaver" in the record of its use at Corey Hill hospital here, which installed an air conditioning system especially designed for hospital use last year.

Dr. Young reports out of 743 operations performed at the hospital during the past year, only one case of post operative pneumonia developed and that case showed quick recovery.

"This was an early instance of the discovery that displaying candy in refrigerated display cases would increase sales sharply."

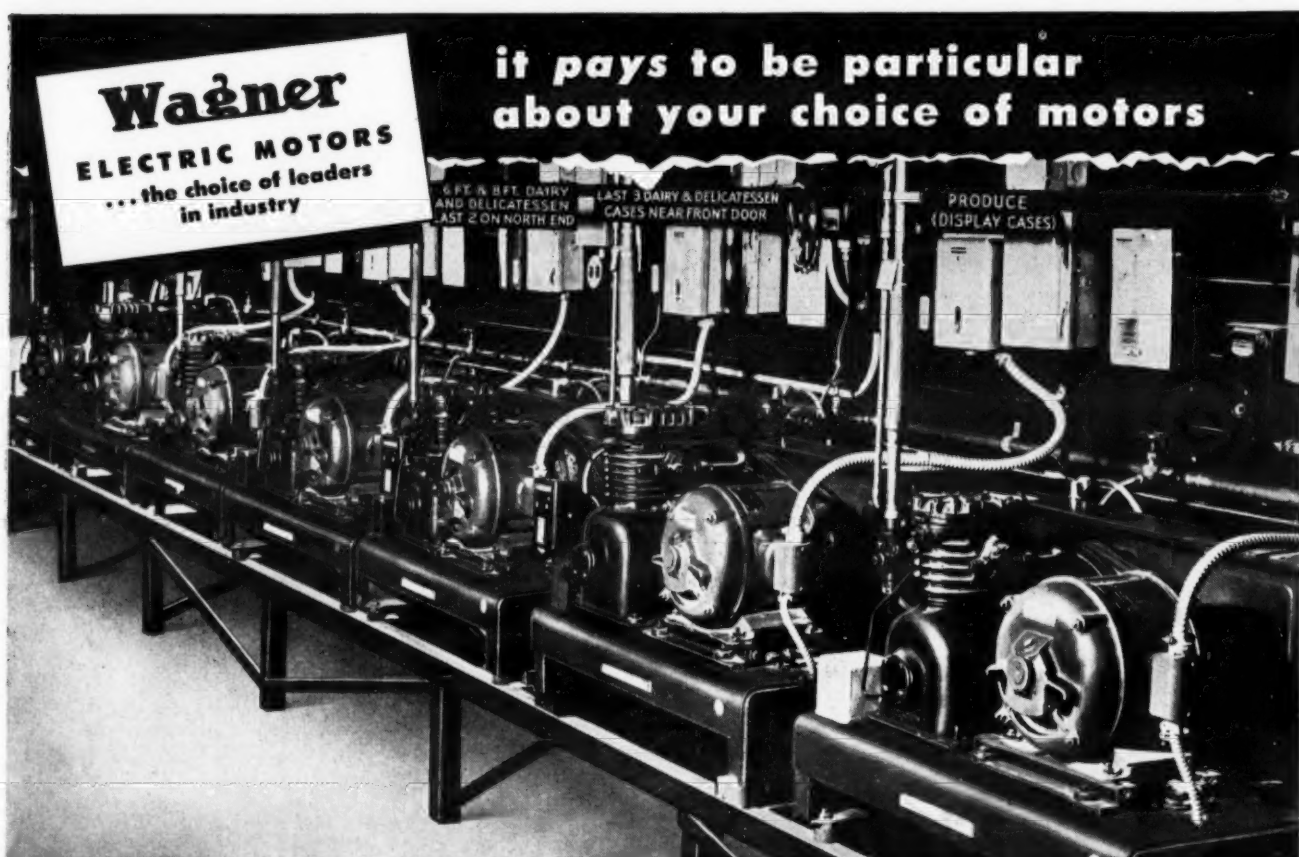
### Evansville Storekeeper Finds Candy Lovers Will Walk Nearly a Mile For a Cold Chocolate Bar

"Trade-ins were an important problem, so suggested allowances were prepared for the guidance of appliance dealers."

### Oakland Dealers' Trade-In Card & Trade Practice Rules Maximum Trade-In Allowance for Used Electric and Gas Refrigerators

Cubic Feet Capacity	3	4	5	6	7	8	9	10	11	12
1 year old	\$40.00	\$55.00	\$65.00	\$75.00	\$80.00	\$85.00	\$95.00	\$110.00	\$120.00	\$130.00
2 years old	36.00	50.00	58.00	70.00	72.50	75.00	85.00	100.00	110.00	115.00
3 years old	30.00	40.00	48.00	55.00	60.00	62.50	70.00	80.00	87.50	95.00
4 years old	22.50	32.50	38.00	45.00	48.00	50.00	55.00	65.00	70.00	75.00
5 years old	16.00	22.50	27.50	30.00	32.50	35.00	37.50	45.00	48.00	52.50
6 years old & over	10.00	13.50	15.00	17.50	20.00	21.00	22.50	25.00	27.50	30.00

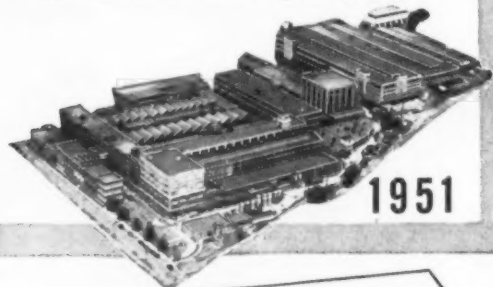
Note: For full porcelain add 10% to above prices. Deduct 15% for "Economy" box.



### 60 years of Progress

1891

In 1891, Wagner Electric Corporation occupied a small two-story building and employed only twenty-two workers. Today, Wagner employs thousands of workers in their giant plant which spreads over a vast acreage on Plymouth Avenue—a warehouse and office building in downtown St. Louis—plants in Edwardsville and Mt. Vernon, Illinois—and branches in 31 principal cities.



1951

you can count on

### Wagner MOTORS to furnish dependable power for your products

"A good motor is one I seldom hear about—and a good motor manufacturer is one who provides prompt honest service for the few motors I do hear about." These words, from the Service Manager of one of the large manufacturers who use thousands of Wagner Motors each year as standard equipment for their products, pretty well sum up the reasons why it will pay you to standardize on Wagner Motors.

You get motors that give uniform performance with exceptionally little trouble... you get well-known motors that add a real selling point to your product... and you get the advantage of a large nationwide service organization to promptly and efficiently repair the very few motors that require attention.

WAGNER ELECTRIC CORPORATION  
6441 Plymouth Ave., St. Louis 14, Mo., U.S.A.

ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES  
AUTOMOTIVE BRAKE SYSTEMS • AIR AND HYDRAULIC

BRANCHES IN 31 PRINCIPAL CITIES







George Mason, president of Nash-Kelvinator Corp., punched the first doorbell in Lincoln, Neb., to lead industry salesmen in a National Salesman's Crusade inaugurated in 1938 to sell this country back to prosperity.

"They called it the 'Recession' then as industry in general slowed to a standstill. Kelvinator came up with a plan that attracted nationwide attention."

"Once again the NEWS puts its finger on a vital problem of the industry in an editorial."

### Sale In Every 10 Calls Results As Salesman's Crusade Opens

LINCOLN, Neb.—Led by President George W. Mason, Kelvinator home office executives and field men inaugurated the National Salesman's Crusade here last Wednesday with a welter of activity which stirred this state capital into a mass cooperative effort the likes of which haven't been seen, according to Governor Roy L. Cochran, since the Liberty Loan drives.

Purpose of the Crusade is to get retail salesmen (not confined to Kelvinator salesmen or to appliance salesmen of any denomination, but extended to all salesmen in every line of endeavor) to make 10 calls daily, in a movement to start the wheels of industry turning again. A national campaign will get under way June 6.

"The New Deal theory of receiving pay for not working had many repercussions. Here's one way that it affected the refrigeration business."

### 'Dearth' of Salesmen In Detroit Is Laid to Layoff Insurance

DETROIT—Reported unwillingness of relief clients to give up the comparative security of their weekly dole-checks for part-time employment in factories, or on farms apparently has a counterpart in the electric refrigeration and appliance field here.



"The Spanish Civil War has since been called a testing ground for the equipment and tactics later employed in World War II. Preservation of human blood first practiced on a large scale here was of prime interest to the refrigeration industry."

### 'STORED UP' HUMAN BLOOD KEPT & SHIPPED UNDER REFRIGERATION SAVES LIVES IN WAR-TORN SPAIN

BARCELONA, Spain—Wounded soldiers of war-torn Spain now have more chance of living as a result of a recent medical discovery in the field of blood transfusion—a discovery which would be valueless if it were not for electric refrigeration.

This discovery which has revolutionized the science of blood transfusion was made by Loyalist Spaniard Dr. Frederick Duran-Jorda, technical chief of Servel de Transfusio de Sang Al Front or the "Service of Blood Transfusion at the Front," as we would say it.

The doctor first experimented with the preserved blood from corpses. But this blood taken from soldiers killed by machine gun slugs and flying shrapnel wouldn't work—experiments showed when a man died a violent death his blood didn't coagulate properly.

So this service sent out a call for volunteers. These donors are bled every three weeks to a month of about 300 cubic centimeters, although many want to give oftener. This blood is mixed with one-tenth part of citrate of soda, 4% solution, and is canned up in half-gallon jars. About six different bloods are mixed to simplify matters technically and biologically.

The blood is preserved by refrigeration at a point one or two degrees Centigrade above zero.

### Fewer Dealers -- And Better

Study of the nation's retail merchandising set-up for electric refrigerators has finally convinced a good many sales managers that there were too many dealers in 1937.

As one sales executive put it: "We went ahead on the theory that if one hen can lay one egg, a thousand hens can lay a thousand eggs. But we soon found that instead of laying eggs, the hens turned to scratching and pecking at one another."

An excess of dealers in any territory invariably seems to lead to price wars, no matter what shape general business conditions may be in, or how ready buyers may seem to be. The weaker ones cannot compete with the stronger, and so they turn to price cutting, partly in retaliation, and partly to save time in some of their investment in merchandise.

"Many tests over a three-year period were conducted by the research committee of the American Society of Heating & Ventilating Engineers before arriving at this figure."

### Experts Now Believe 75° Is Right Temperature For Human Comfort

"Air conditioning shut the door (and the windows, too), for which many people gave thanks."

### Air Conditioning Enables Cafe Patrons To Howl, Neighbors To Sleep

SAN ANTONIO, Tex.—Air conditioning is credited with relieving a situation which has puzzled police officials for years—the problem of handling complaints about noisy eating and drinking establishments turned in by neighbors who "want to get a little sleep."

Gus Klockenkemper, police inspector, has discovered that the police have not received any complaints of loud music and other disturbances against food and drink places that are air conditioned.

"If all the eating and drinking establishments in the city were air conditioned even including their drive-in parking places, it would be a great relief to the police department," says Inspector Klockenkemper, whose experience with the night noise problem has made him an enthusiastic booster for air conditioning.

"Psychology in the sales approach to prospects was a subject of continuing interest."

### 'Back-Door Canvassing' Advantages Listed

TOPEKA, Kan.—Back-door canvassing is the most favorable means of approaching housewives who do their own housework, believes Ross Hill, head of the appliance department of Karlan Furniture Store, here.

Advantages of this method, as Hill has found them from actual experience, are:

1. Coming in through the back door the salesman usually can see all the home's appliances.
2. If there's an ice box in the home, he can spot it quickly, and plan his sales talk accordingly.
3. The housewife is much more likely to open the back door to a visitor than she is to answer the front doorbell.
4. Occasionally, the salesman may arrive in time to help fix a recalcitrant washer, and tie it in with a sales talk on a new replacement.
5. The salesman can analyze the family's needs better. For example, if there are greasy overalls, he would try to sell the family a more expensive, better washer.
6. Women who dislike having the neighbors see them at their front doors in old clothes will not object to meeting visitors at the back door, since this is more private.

Tube bending contests, known then also as soft tubing erection contests, became popular in 1938, gave servicemen a chance to demonstrate their ability at quickly forming tubing into specified designs.



"Franchised air conditioning dealers and contractors did not want to be submerged in the heating and piping trades while the latter groups figured they were the logical ones to take over."

### Air Conditioning Dealers Insist New Association Is Needed

"This decision in court was of interest to many factors in the household refrigerator business."

### Award of \$350,000 to G-E Distributor Set Aside By Court

HARRISBURG, Pa.—Declaring that the General Electric Co. could not be bound by "unusual and extraordinary" statements and inducements made by its officers to distributors and dealers, the Dauphin County Court on March 21 set aside a verdict of \$350,078.29 in favor of N. K. Ovalle, Inc. former G-E Distributor in this territory.

"Locker plants receive the official nod from the nation's capital."

### REA Is Authorized To Finance Building of Locker Plants

WASHINGTON, D. C.—Wide-spread government financing of locker plant systems through Rural Electrification Administration is now a possibility, following the recent opinion issued by the Comptroller General that the REA may use its funds for this purpose, if it wishes.

## Want less pressure drop in Line Valves?

Get



IN-LINE  
DIAPHRAGM PACKLESS  
LINE VALVES

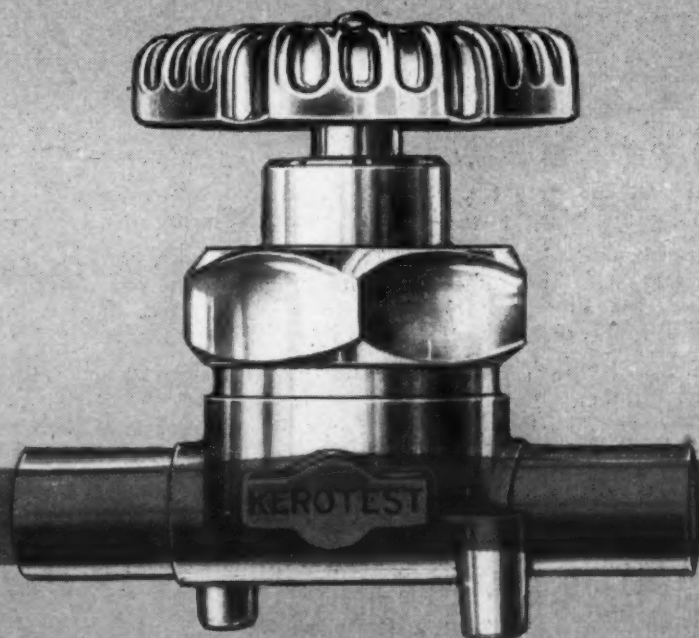
Check these  
"Extra Value" Features

- ✓ FULL FLOW—wide passages, unrestricted flow pattern assures minimum pressure drop.
- ✓ REDUCED SERVICING—fatigue-free, special alloy, non-perforated diaphragms practically eliminate replacements.
- ✓ FOOL-PROOF—metal-to-metal seal back seating features permits safe diaphragm replacement under pressure if ever needed.
- ✓ INSTALL FASTER—special extended leg holds the mounting screws while you drive them. Prove this yourself!
- ✓ CONVENIENT—comfortable handwheel design permits easy operation from all positions even in cramped quarters.

Manufactured Exclusively by KEROTEST MANUFACTURING CO., PITTSBURGH 22, PA.



See Our Exhibit at  
NAVY PIER - Chicago  
7th FLOOR  
REFRIGERATION AND  
AIR CONDITIONING  
EXPOSITION  
Nov. 5-8, 1951



Always Extra Value

at No Extra Cost

SEE YOUR



WHOLESALE



**"By this time the national organization of service engineers had grown to the point that its annual convention not only attracted a sizeable number of servicemen but many important industry executives as well."**

### PROGRESS OF SERVICE ENGINEERS EVIDENCED AT BUFFALO MEETING

BUFFALO—Refrigeration service engineers, meeting here last Wednesday through Friday for their fifth annual convention, heard discussions of new service problems and methods in the best technical program the organization has ever sponsored, saw their members display their craftsmanship in a tube-bending contest, and viewed exhibits by manufacturers of parts and supplies.

"Tube-bending contests aroused the interest of servicemen and contractors and pointed the way to neater installations."

### Thermal Co. Stirs Interest Of Service Men In Their Craft with Novel Contest

ST. PAUL—A soft copper tubing erection "championship" contest, in which service men were the participants, featured the annual Thermo-Imperial Clinic held here May 20 by Thermal Co., Inc., in cooperation with Imperial Brass Mfg. Co., reports H. W. Small, Thermal Co. president.

The contest had to do with bending and erecting copper tubing and flare fittings into a specified design, contestants having been sent a copy of the problem a week before.

## 1938

"Considerable speculation was aroused in numerous fields by this development."

### 'Death-Ray' Lamp May Find Use In Refrigerators, Conditioning

NEW YORK CITY—A practical and inexpensive "death-ray" for microbes, which has been used successfully in household refrigerators and also is applicable in air-conditioning installations, was demonstrated here March 7 before a meeting of 1,000 of the nation's public health authorities, physicians, and scientists.

The germ-killer, known technically as "a process of sterilization by selective ultra-violet radiation," was perfected by Dr. Harvey C. Rent-schler, director of research of the Westinghouse Lamp Laboratory and Dr. Robert F. James.

"The need for a national organization to promote and protect their interests gains the attention of appliance dealers."

### Dealers Trying To Organize On National Scale

NEW YORK CITY—Representatives of some 30 electrical and appliance dealer associations throughout the country are scheduled to meet here March 7 to discuss the advisability of forming a national association, according to William H. Ingersoll, of the Electrical Appliance Dealers Association of Brooklyn, Inc.

"With frozen foods as anything else, most people don't like to buy a pig in a poke."

### 'DISPLAY' CASE CALLED FROZEN FOODS NEED

CLEVELAND—Urging frosted food dealers to present better visual displays of the food products (refrigerated display cases) as a means of promoting quick frozen foods, C. Q. Sherman, head of the Sherman Co. of New York City, in an address before a special frosted foods clinic held here recently, pointed out that too many dealers are keeping the products out of sight in hidden cabinets.

The survey, Mr. Sherman continued, showed that dealers who exhibit quick-frozen food products in open-view display cases sell four times as much produce as do dealers who keep their foods in concealed cabinets.

"Parts wholesalers were helping in many ways to educate further the servicemen and contractors, and educational meetings such as this have grown to great popularity today."

### Scranton Jobber Holds Second of Meetings For Servicemen

SCRANTON, Pa.—More than 200 contractors, dealers, and servicemen attended a recent two-day exhibit conducted by Central Service Supply Co., 209 Jefferson Ave., refrigeration supplies and heating controls jobber, at which the complete line of Mercoid controls for refrigeration, air conditioning, and heating were shown.



"The spread of unionism even got into the selling field and union leaders were all set to tell dealers how to operate their business, including such details as how much to allow on trade-ins."

## Salesmen's Union Opens Drive on Price Cutters in Milwaukee; First Chicago Contracts Signed

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

#### Carrier Introduces Self-Contained Central Systems up to 10 Tons

SYRACUSE, N. Y.—Introduction of self-contained "central-station" cooling systems in 5 and 10-ton capacities and announcement of some new distributing policies, marked a meeting of approximately 300 Carrier dealers and distributors.

Tendency of the concerns engaged in the manufacture of air conditioning equipment to supply "package" merchandise was demonstrated by the announcement of the new central-station units. These new conditioners require no refrigerant connections on the job, and may be placed in service with simple water, electric, and duct connections.

#### York To Concentrate 1938 Sales Efforts On 'Package' Equipment

YORK, Pa.—Major sales efforts of the York Ice Machinery Corp. for 1938 will be placed behind a new portable room cooler embodying some novel features, and self-contained "package" conditioners for commercial applications, the company's distributing organization learned at the annual York conference and exposition.

#### Imperial Brass Valve Kit For Use On Hermetics

#### H. V. HIGLEY ELECTED PRESIDENT OF ANSUL

#### New Firm To Make Valves, Fittings

PITTSBURGH, Pa.—Announcement was made here last week of the formation of Superior Valve & Fittings Co. which will manufacture a line of diaphragm packless valves, flare fittings, and refrigeration accessories.

#### Kerotest Set Designed to Aid Servicing of Various Hermetic Units

#### BOLING DIRECTS SALES FOR M. A. D.

#### Philco Dealers Will Sell York Portable Cooler

CHICAGO—Sales hook-up between Philco Radio & Television Corp. and York Ice Machinery Corp., under which Philco this season will undertake national distribution of a single York room cooler model, to be known as the "Cool Wave" and retailing for \$400, was announced at Philco's convention.

#### Henry Valve Offers Driers With Choice of Dehydrants

#### 2,800 Stores Now Sell Birdseye Frosted Foods

#### Owens, Corning Form Company To Produce 'Fiberglas' Products

TOLEDO—Formation of Owens-Corning Fiberglas Corp., an independent corporate structure financed jointly by Owens-Illinois Glass Co. and Corning Glass Works for the production of various fiber glass products and continuation of research and development in this field, has been announced by Amory Houghton, chairman of the board of the new company, and Harold Boeschstein, president.

#### REFRIGERATOR TO BE MADE & SOLD BY PHILCO FIRM

INDIANAPOLIS — Philadelphia Storage Battery Co., parent company of Philco Radio & Television Corp. last week entered the household electric refrigerator field by purchasing the Conservador refrigerator division of Fairbanks, Morse & Co., here.

#### Jewett Introduces New 'Beerador' Cooler

#### TECUMSEH NOW PRODUCING LINE OF HERMETICS

TECUMSEH, Mich. — Tecumseh Products Co. is now in production on hermetically sealed condensing units in 1/4, 1/2, and 3/4-hp. sizes for household or light commercial use, F. K. Smith, sales manager of the company's refrigeration division, announced last week.

Within about 60 days Tecumseh will release for production a twin-cylinder sealed unit of the same type in 1/4 and 1/2-hp. sizes, Smith stated.

#### Stream of Air Cools Beverages In New Type Koch Cooler

NORTH KANSAS CITY, Mo.—A new type of bottled beverage cooler which utilizes a rapidly circulating stream of air instead of water bath or brine is being marketed by Koch Refrigerators here under the trade name "ZeroStream."

#### ALCO'S GLASS EVAPORATOR GOES TO WEST COAST

#### Ranco Introduces New Commercial Control

COLUMBUS, Ohio—A commercial control of entirely new design, said to have a wider range than any other control now on the market, has just been announced, by Ranco, Inc. here. Known as Ranco Type "G," the new control is adaptable to pressure and temperature, heating, or cooling.

#### New Company Makes Compressor Seals

CHICAGO—Headed by A. E. Karlberg, a new company to be known as the Chicago Seal Co. has been organized here to specialize in the development and manufacture of compressor seals for original equipment and replacement purposes.

# SOLENOID VALVES

*Made Better to Last Longer—and Backed by An 18-Months Guarantee!*

JE SOLENOID VALVES are made by the Jackes-Evans Mfg. Co. of St. Louis, manufacturers for 63 years of quality industrial products—many of a high-precision nature.

In establishing the JE Controls Division, no expense or effort has been spared to equip the new factory with the most modern facilities for the job. JE SOLENOID VALVES have been scientifically developed and thoroughly tested in a complete research laboratory under the direction of competent engineers.

In short, JE SOLENOID VALVES are built to a standard to justify our unconditional 18-months guarantee.

### 5 FEATURES OF DEPENDABILITY:

- 1 Tight Seating . . . No bubble tolerance
- 2 Simplicity . . . Only two moving parts
- 3 Long Life . . . Cool Coils
- 4 Durability . . . All corrosion-resistant materials
- 5 Opening Pressure Differential—higher than most others on the market

May we submit samples for your test and approval? Write today for details.

JACKES-EVANS MANUFACTURING COMPANY  
CONTROLS DIVISION  
4427 GERALDINE AVE. • ST. LOUIS 15, MO.

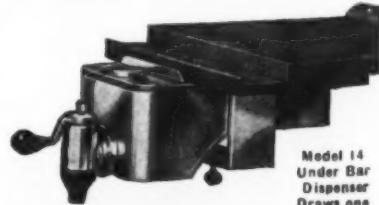
### DEALERS - DISTRIBUTORS WANTED!

If you are prepared to handle sales, installation and service for our stainless steel soft drink Dispensers for Bars and Taverns, advise business experience and some facts relative to your financial ability.

#### INCREASES PROFITS FOR BARS AND TAVERNS

Exceptionally profitable to handle.—Write to

MULTIPLEX FAUCET CO., 4326 DUNCAN, Dept. ARN-14, ST. LOUIS, MO.  
—MANUFACTURERS OF SOFT DRINK DISPENSERS OVER 45 YEARS.—



Model 14 Under Bar Dispenser Draws one sweet drink and seltzer



Home of Deepfreeze  
Home Freezers,  
North Chicago, Illinois

...speaking of history...

Home of Deepfreeze  
Refrigerators,  
Lake Bluff, Illinois



# Deepfreeze Home Freezers

TRADE-MARK REG. U. S. PAT. OFF.

have grown from an idea to a great industry in 13 years!

In 1938 the name Deepfreeze was coined and registered as a trademark. The first Deepfreeze Home Freezer was advertised in The Saturday Evening Post for October 19, 1940—the first home freezer on the market!

Since 1946 a host of other manufacturers have begun to make home freezers, but no other has ever duplicated the features of the original, the pioneer, the genuine Deepfreeze Home Freezer.

The great new Deepfreeze Home Freezer line, announced in The Saturday Evening Post for August 25, 1951, is far and away the finest, most complete, and most salable line of home freezers ever presented. Write for information about the Deepfreeze Appliance Franchise.

## THERE'S ONLY ONE GENUINE Deepfreeze Home Freezer

© 1951 Deepfreeze Appliance Division, Motor Products Corporation

FARM AND HOME FREEZERS • REFRIGERATORS  
ELECTRIC RANGES • ELECTRIC WATER HEATERS

All products of Deepfreeze, North Chicago, Illinois

Full page, full color announcement  
of new Deepfreeze Home Freezer Line,  
from Saturday Evening Post,  
August 25, 1951.

## Announcing a new and complete line! Deepfreeze Home Freezer LARGER CAPACITY AT LOWER COST



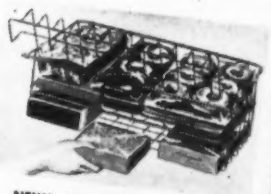
New convenience features  
you'd expect only from  
the pioneer and leader  
in the Home Freezer field!



**NEW! THE "MENU-MAKER"**  
Four one-pint aluminum containers, red, blue, green, and gold, hold entire pre-cooked meal or left-overs. Freeze, heat, serve, all in the same beautiful containers. Exclusive with Deepfreeze. Extra convenience!



**NEW! "SILENT SIGNAL"**  
White light shows when power is on. Red light flashes warning if inside temperature gets too high for safety. This Deepfreeze feature makes it easier to control temperatures correctly for proper preservation of food.



**NEW! THE "HANDY BASKET"**  
Double deck, side-opening basket holds most-used frozen foods. Has hinged side for removing foods below without disturbing those above. Only Deepfreeze Home Freezers have it. More extra convenience!

**6 MODELS AND FOUR SIZES TO CHOOSE FROM!**  
7, 13 (illustrated), 17 and 23 cu. ft. sizes are made in deluxe models with the features shown here. 7 and 13 cu. ft. sizes are also made in popularly priced standard models.

HERE are the finest Deepfreeze Home Freezers ever built! They all give greater storage capacity at lower cost. They all have advanced features for thrilling new convenience. And they preserve them safely for long periods of time. Deepfreeze offers you a choice of six models in four sizes. Among them is the one that's "just right" for you, whether your family is large or small. Ask your Deepfreeze dealer to show

you how it will give your family better eating with less effort. And how it will pay for itself in cash savings on vitamin-rich frozen fruits, vegetables and prime meats! Remember, Deepfreeze pioneered the Home Freezer twelve years ago. So Deepfreeze engineers are obviously the most experienced in building Home Freezers. For longer, quieter service and complete satisfaction, your best buy is a genuine Deepfreeze Home Freezer!

THERE'S ONLY ONE GENUINE **Deepfreeze Home Freezer**  
FARM AND HOME FREEZERS • REFRIGERATORS • ELECTRIC RANGES • ELECTRIC WATER HEATERS  
© 1951 Deepfreeze Appliance Division, Motor Products Corporation. Specifications subject to change without notice.  
All products of Deepfreeze, North Chicago, Illinois



## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

### The Ku Klux Klan (July 5, 1933)

Art Scaife, young red-head from the G-E appliance merchandising department has this one to report:

Down in Atlanta, Gawga, Distributor Dan Alexander and his new retail sales manager, huge Warde Stringham (former G-E distributor in Des Moines), were settling a few problems when in busted a pert little fellow, puffing and blowing, and chewing vigorously on a cigar with a diameter big enough to plug the bung-hole of a beer barrel.

"Where the so-and-so and so-and-so do you so-and-sos keep yourself, anyway?" he panted. "I've been looking all morning for you so-and-so so-and-sos."

Warde shifted his mammoth bulk a bit menacingly, and looked to Dan for permission to throw the so-and-so out.

Silent Dan let him get to his point.

"I've just had my first comfortable ride on a Pullman sleeper," he said. "It was cool as a cucumber, and so was I. They tell me that it was air conditioned. They also tell me you've got air conditioning. Very well, I want you to air condition my home. Put your so-and-so refrigerators in it, too. Send me the bill when you get through."

Handing them his card, he walked out. Warde was struck dumb, and

Silent Dan was even mummer than usual. Their visitor was Imperial Kleagle Evans of the Once-mighty Ku Klux Klans. And according to the banks, anything Evans wants, he should get. He can (and what's more important, will) pay for it and never miss the coin.

S. C. Nowack, a Baltimore salesman, made a return visit to a home in which he recently installed a box. "How it is working and are you satisfied?" Nowack asked the owner.

"Fine," the owner replied, "but you know that light you people put on the inside of the box."

"Yes," Nowack answered.

"Well, I don't like it. My wife took the light out and fixed it up with an alarm bell. Every time I open the door to pull a cool bottle from near the freezer, that darned bell rings and she comes running into the kitchen to catch me red-handed."

### The ERN Bureau of Missing Men

(Dec. 18, 1935)

Among the most persistently time-grabbing of all the duties which fall to the lot of the ELECTRIC REFRIGERATION NEWS editorial staff is that of answering inquiries. These come in by mail, by telephone, and with the person of the inquirer. They range from requests for the address of the

manufacturer of an icebox nailed together during Garfield's last administration up to three-page questionnaires from advertising agencies which are trying to wrest a big account away from another agency.

After so many years of it, we thought we had these various types of inquiries pretty well catalogued. But a new one came in recently.

A Detroit woman called us up on the phone, and wanted us to help locate her husband. It seems that he had left his home, hearth, and hausfrau for parts unknown, and she was determined to catch up with him.

He never missed a copy of ELECTRIC REFRIGERATION NEWS, she remembered, and hence she guessed that he would probably send a change of address to our subscription department. If we would only be so kind as to give her that new address, she'd track him down pronto. Pretty clever of her, eh?

Now here was a problem of ethics, with contenders in our department upholding each side of the debate. But luckily no decision was necessary, for the AWOL gentleman has not, as yet, sent us his new address.

### The New Deal In a Small Town

(Dec. 25, 1935)

Last week-end the writer, like Eliza, made a perilous crossing of the ice. Motoring some 500 miles down to Marshall, Illinois (our home town), over glassy and treacherous roads, the air was so thoroughly refrigerated that we began to wish for some of the impervious qualities of the fabled brass monkeys.

But the air wasn't all that was

frigid around Marshall. We found the town, as a whole, rather cold toward the New Deal.

Of course there were exceptions.

The editor of the Clark County Democrat, for whose encouragement and gentle guidance in days gone by your correspondent will be forever grateful, and who fought the good fight for a long stretch of lean years, now is enjoying the fruits of a state job. So is his son, who married the only good-looking Taubeneck in captivity.

A former garage owner who went busted in a large way at the beginning of the depression, and who lived on the dubious charity of friends until quite recently, now opens a door at the State House in Springfield three mornings a week, 18 weeks a year. The rest of the time is his own (another payroller closes the door in the evening).

The coach of the championship high school football team feels grateful to the AAA, which pays the farmers not to work—hence their sons have little or nothing to do, and so they come to high school. These farm boys make rugged guards and tackles, and out of the crop the coach got one first-class fullback, too.

But three farmers we talked to, all fairly large landholders for that section, think that the AAA is the "biggest flock of nonsense since William Jennings Bryan." The business of farmers, they affirm, is to farm.

Publisher Harry Potter of *The Marshall Herald*, for whom this writer went to work at the age of 10 as a printer's devil and press feeder, is now growing a mustache. He says that it's about the only activity he knows of today that isn't subject to taxation. But he wonders if the AAA would pay him for not raising a mustache.

Mr. Potter says that the farmers who are getting AAA money aren't the ones who really need it, or the kind who will spend it. They are socking it in the bank.

Treasurer Earl Morris of the Marshall State Bank says deposits are high, and that they have more money on hand than they know what to do with—there's no place to invest it.

The writer's father, a druggist, finds the state 3 per cent sales tax a handicap. People drive 16 miles to Terre Haute, Indiana, for purchases to avoid this tax (Indiana has none). However Dad's partner, John Davison, a lifelong Democrat, is an ardent New Deal supporter.

General impression gained from shopkeepers and professional men about this town of 2,400 population is that business is still rotten, and that the New Deal has probably hurt more than it has helped.

### Trip Around the World

(Jan. 1, 1936)

Next Wednesday, Jan. 8, we plan to attend the Kelvinator convention in Detroit, and then load up the Auburn speedster and start.

First stop will be Jackson, Mich., to look in on the Sparton convention. Then Chicago, and a visit with Stewart-Warner officials to get the story of their new line.

That done, we'll sail down the wide

new Governor's Highway to St. Louis. Thence to Oklahoma City, and on to San Diego and Los Angeles via the southern route.

After quick visits with our friends in California, and after disposing of the Auburn speedster, we embark on the following itinerary:

Jan. 25, sail from San Francisco, S.S. Malala.

Jan. 30, arrive Honolulu, Hawaii, in the morning. Stop over six days.

Feb. 5, sail from Honolulu, S.S. Aorangi.

Feb. 14, arrive Suva, Fiji Islands, in the morning. Six hours in port.

Feb. 14, sail from Suva, Fiji, in the evening, S.S. Aorangi.

Feb. 17, arrive Auckland, New Zealand, in the morning. Two days in port.

Feb. 18, sail from Auckland in the evening, S.S. Aorangi.

Feb. 22, arrive Sydney, New South Wales, Australia, in the morning. Stop over in Australia about 14 days. Visit various interior points of interest.

March 7, sail from Sydney, S.S. Marella.

March 9, stop one day in Brisbane, Queensland, Australia.

March 12, stop few hours in Townsville, Queensland, Australia.

March 15, visit few hours in Thursday Island.

March 19, visit few hours in Darwin, North Australia.

March 24, stop over one day in Sourabaya, Java.

March 25, stop over one day in Semarang, Java.

March 26, stop over one day in Batavia, Java.

March 28, arrive Singapore, Straits Settlements, in the morning. Four days in and about Singapore.

April 2, sail from Singapore, BISN steamer.

April 4, one day in Penang, Straits Settlements.

April 7, arrive Rangoon, Burma. Four days in and about Rangoon.

April 11, sail from Rangoon, via BISN steamer.

April 14, arrive Calcutta, India, in the morning. Eleven days in India, crossing to Bombay by train.

April 25, sail from Bombay, S.S. Moloja.

April 29, stop four hours in Aden, Arabia.

May 3, arrive Port Said in morning. Stop one week—three days in Egypt and three days in Palestine.

May 10, sail from Port Said in morning, S.S. Naldera.

May 13, call few hours in Malta.

May 15, arrive Marseilles in the morning.

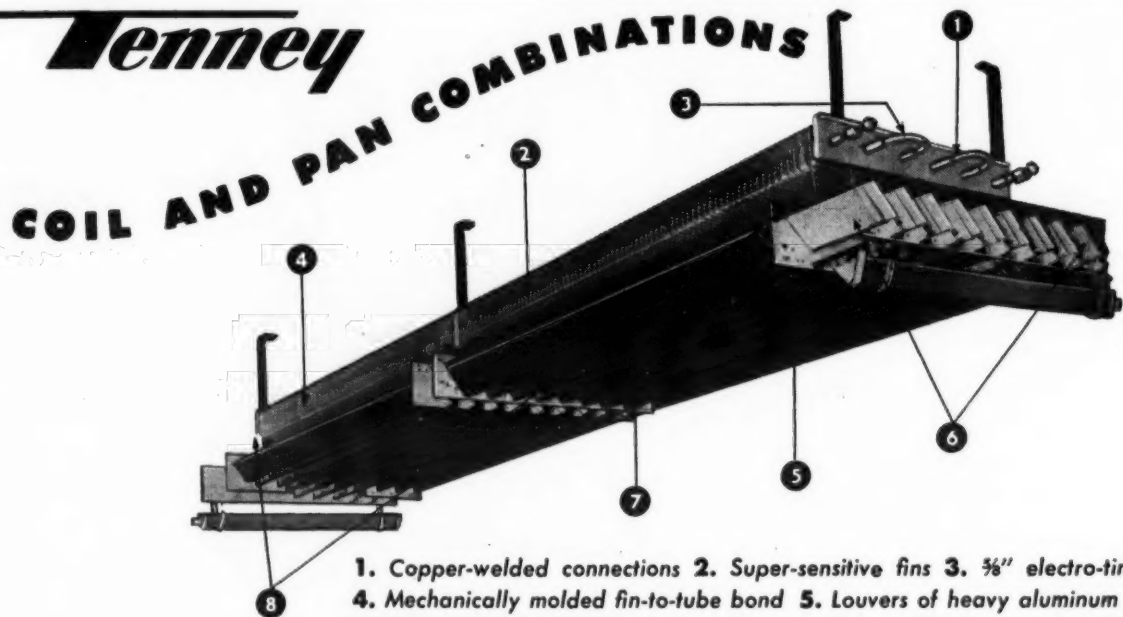
Dates of arrival at the following cities on the itinerary have not yet been definitely determined:

Paris, France; Berlin and Leipzig, Germany; Milan, Italy; Zurich, Switzerland; Stockholm, Sweden; Vienna, Austria; Budapest, Hungary; Prague, Czechoslovakia; London, England; Amsterdam, Holland.

June 14-16, the International Congress of Refrigeration, The Hague, Holland.

After that England, Canada, and home—if we live so long.

Subscribers from many points on our journey have already written us extending us a glad hand, and hoping that we'll call on them. Will do.



1. Copper-welded connections 2. Super-sensitive fins 3.  $\frac{3}{8}$ " electro-tin-plated tubing 4. Mechanically molded fin-to-tube bond 5. Louvers of heavy aluminum alloy 6. Scientifically placed louvers for improved air circulation 7. Louvers temperature-equalized to prevent dripping 8. Adjustable pull hook hanger for easy installation and cleaning

#### Coils And Coil & Pan Combinations For 8 ft. Walk-In-Coolers

BOX SIZE	BTU/HR	SQ. FT.	NO. COILS	COIL AND PAN COMBINATIONS			COILS ONLY		
				MODEL NO.	DIMENSIONS IN INCHES		MODEL NO.	DIMENSIONS IN INCHES	
					D W L			D W L	
5 x 4	2496	161	1	548P	13 24 46	C548	7 21 40		
5 x 5	3094	199	1	558P	13 27 48	C558	7 24 42		
6 x 4	3120	201	1	648P	13 24 54	C648	7 21 48		
6 x 5	3225	206	1	658P	10 1/2 38 57	C658	3 35 50		
6 x 6	4160	274	1	668P	13 32 54	C668	7 28 48		

#### Coils And Coil & Pan Combinations For 10 ft. Walk-In-Coolers

BOX SIZE	BTU/HR	SQ. FT.	NO. COILS	COIL AND PAN COMBINATIONS			COILS ONLY		
				MODEL NO.	DIMENSIONS IN INCHES		MODEL NO.	DIMENSIONS IN INCHES	
					D W L			D W L	
5 x 4	2925	192	1	541P	13 35 40	C541	7 31 1/2 33		
5 x 5	3861	249	1	551P	13 35 47	C551	7 31 1/2 41		
6 x 4	3432	220	1	641P	13 24 58	C641	7 21 52		
6 x 5	3780	242	1	651P	13 24 57	C651	7 21 50		
6 x 6	4570	292	1	661P	13 32 58	C661	7 28 52		

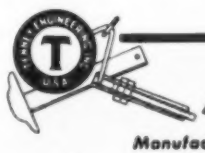
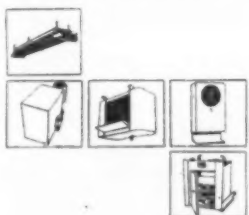
A complete range of standard sizes · Special sizes built to order

14 x 12	12075	614	2	1248P	10 1/2 32 135	C1248	3 28 128		
14 x 14	12075	710	2	1448P	10 1/2 38 126	C1448	3 35 119		
16 x 8	9240	535	2	1688P	10 1/2 24 154	C1688	3 21 148		
16 x 10	10692	618	2	1608P	10 1/2 24 176	C1608	3 21 170		
16 x 12	12636	783	2	1628P	10 1/2 24 176	C1628	3 21 170		
16 x 14	14256	825	2	1648P	10 1/2 24 176	C1648	3 28 170		

14 x 12	12480	777	2	1241P	10 1/2 32 134	C1241	3 1/2 28 128		
14 x 14	13125	766	2	1441P	10 1/2 38 135	C1441	3 1/2 35 128		
16 x 8	11544	716	2	1681P	10 1/2 24 162	C1681	3 1/2 21 154		
16 x 10	11880	689	2	1611P	10 1/2 32 149	C1611	3 1/2 28 143		

DEALERS,  
JOBBER,  
ENGINEERS

Tenney brings you the advantages of advanced engineering, of manufacturing facilities that can handle any and every job. A line that is complete in every detail. Remember, you always get more from Tenney. Literature and further information on request. Write to Tenney Engineering, Inc., Dept. E 26 Avenue B, Newark 5, New Jersey.



Manufacturers of Automatic Temperature,  
Humidity and Pressure Control Equipment

# Tenney

## We're Young Ol'-Timers, Too!

As a pioneer wholesaler in the Rocky Mountain territory, we are still striving to build and improve our business so that we can serve our customers better!



SEND FOR OUR NEW CATALOG

McCombs Refrigeration Supply Co.

1524 15th, Denver, Colo. 322 N. First, Albuquerque, N. Mexico



MAKERS OF  
WORLD'S FINEST  
PIPE COILS



FINEST QUALITY  
AMMONIA  
CONDENSERS

## Where ACME makes 'peak' products for cooling purposes

This is the ad that never appeared. In 1926, Acme Industries, Inc., was only seven years old and had not yet attained enough production capacity to warrant advertising in the new trade magazine, Air Conditioning and Refrigeration News.

Already established in the field of manufacturing industrial and heavy refrigeration equipment and noted for high quality production, most of Acme's output at this time was being sold by larger manu-

facturer's under their own name. As the years passed Acme capacity increased, while maintaining the same standards of quality, until now air conditioning and refrigeration engineers know that when you specify Acme, you immediately solve most of your equipment needs.

Today, manufacturers of a complete line of air conditioning and refrigeration equipment, Acme takes this opportunity to run an ad that it should have run 25 years ago.

ACME INDUSTRIES INC., Jackson, Mich.

Serving the refrigeration industry since 1919

ACME  
congratulates  
AC&RN

on their  
Silver  
Anniversary

## Over 1700 reasons why you should specify ACME

For the last 32 years Acme's expert engineers have been refining and adding to the Acme line of refrigeration and air conditioning products, until they now have over 1700 specific differentiations among their basic models. Somewhere in these varied applications is bound to be the answer to your particular cooling need.

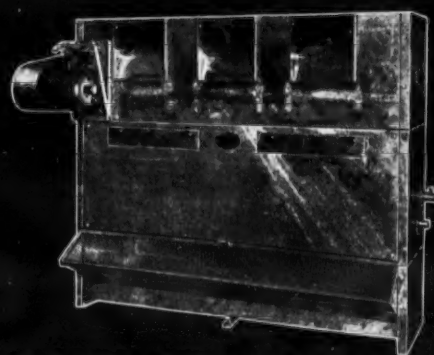
The latest addition to the Acme line is the Flow-Cold\* Liquid Chiller. A compact, self-contained unit whose myriad uses cover the entire industrial process coolant field and the commercial water chilling and air conditioning business.

Take advantage of Acme experience and engineering. Write us today for information on any of the products we manufacture. Pipe coils, cooling towers, condensers, water chillers, heat exchangers, oil separators, finned coils, industrial unit coolers, and liquid receivers.



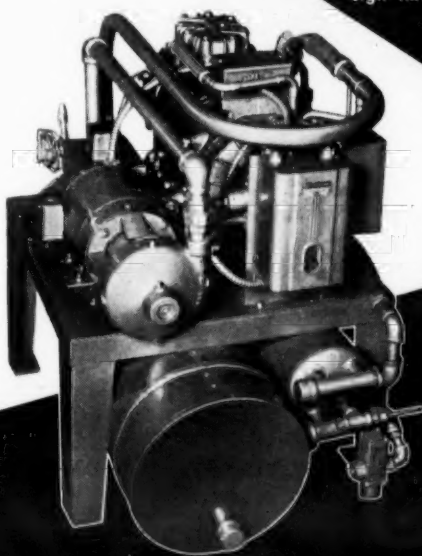
DRY-EX WATER CHILLER

More than 700 combinations of heads, water passes, baffle spacings and tube lengths, capacities from 1 to 200 tons. High rate of heat transfer; replaceable tubes; optional choice of single or dual circuits on 12" or larger models; positive oil return without the need of oil separator. Improved design throughout.



BLO-COLD\* Industrial Unit Coolers

5 distinct series with more than 260 combinations. Dry coil, continuous brine spray defrosting, or flooded ammonia operation. Coils are easily accessible, fan sections are separable, and large doors facilitate inspection. Hot Dip galvanized after fabrication.



ACME OIL SEPARATORS

10 Freon models and 6 Ammonia models. Provide positive oil separation, are easy to maintain, help to curb compressor discharge noises.



EVAPORATIVE CONDENSERS

For freon or ammonia in more than 30 models with capacities up to 1,250,000 BRU/Hr. Sturdily constructed under rigid inspection; hot-dip galvanized after fabrication. All prime surface coils, trouble-free bearings and non-clogging spray nozzles are only a few of the added advantages found in Acme Condensers.



ACME CONDENSERS

Noise free, easy-to-clean, leak-proof joints. More than 120 models and standard sizes of Freon and Ammonia shell and tube and shell and coil types to meet your every requirement.



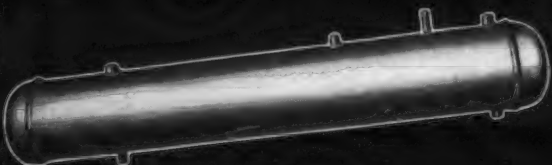
ACME COOLING TOWERS

Capacities from 3 to 40 tons. Induced draft design for increased efficiency, with quiet operation and water saving features. Housing consists of 11 and 14 gauge steel, hot dip galvanized after fabrication. Non-Corrosive cooling pads.



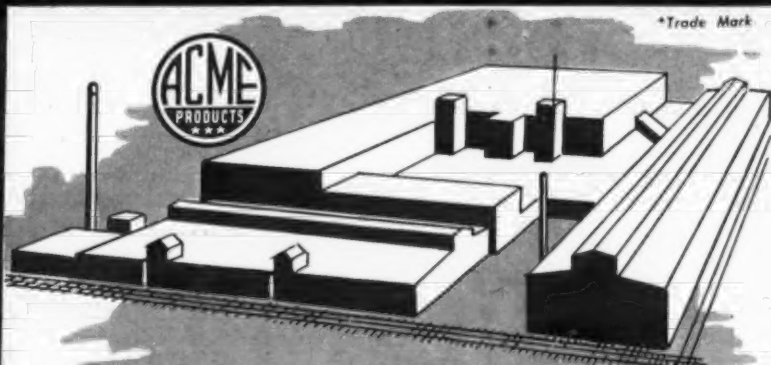
HI-PEAK\* Water Coolers

Large storage capacity, galvanized after fabrication. 7 standard sizes. Intermittent or continuous operation. EVERDUR tank and factory insulation are optional.



ACME LIQUID RECEIVERS

More than 70 standard sizes, for Freon, Ammonia, or other refrigerants — are easy to install and maintain.



ACME INDUSTRIES Inc.

700 MECHANIC ST., JACKSON, MICH.

Continuously serving the refrigeration  
and air conditioning industry since 1919



## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

### Only 87% Increase

(Feb. 8, 1939)

H. E. Humphreys, commercial refrigeration distributor in Concord, N. H., feels pretty sad about 1938. He increased his business in 1938 only 87% over 1937. It was the first year in four he hadn't shown at least a 100% increase over the previous year.

Other distributors at Ed Terhune's eastern conference joined Mr. Humphreys in weeping over his disgrace and chagrin.

### Hazard for Servicemen

(March 12, 1939)

Detectives in a certain metropolis were baffled by the occurrence of no less than 10 gas leaks within a few weeks in the same apartment.

They finally arrested the maid who confessed to having fallen in love with the plumber who repaired the first leak, and having purposely caused the nine succeeding leaks to bring him back again.

Moral is this. If you have a string of unexplained leaks in your refrigerant line, you might check up on the serviceman's profile to make sure that your kitchen help isn't making love bloom amid the leakage.

And everyone thought that sort of thing went out the door with the passing of the iceman.

### Setting the Stage

(April 19, 1939)

Glamour comes to refrigeration. Brochures describing the new Koch florists' cabinets are not only done in beautiful color, but as they are opened there floats up an aroma of enticing perfume.

This treat to eye and nostril is one of the advertising ideas of Sam Glass, who, we understand, is no stranger to stage effects and is bringing his theater training right into the refrigeration business.

Sam has been "treading the boards" ever since he stopped a show as a kid with a hot fiddle and snappy songs. Sam is now the footlight toast of Kansas City after a long string of cheered performances in amateur plays. He is a master dialectician and has "doubled in brass" by doing a turn of crooning on the radio. He was also a good baseball player. And now he's a smart merchandiser.

### Franklin Delano Roosevelt

(July 5, 1939)

Interviewing the President of the United States always is an event, even if one has been lambasting hell out of him and his policies for six years.

After all, he is one of the leading Personalities of our era, no matter whether you think he is the Savior of the Downtrodden and the Salva-

tion of the World, or whether you believe he is That Crackpot in the White House and The Most Dangerous \*\*\*\$&&&!!! Alive.

One of the tests of a Personality is that feeling toward him is not Lukewarm—he is either detested, resented, or loved and admired. Roosevelt fits that test hands down.

All this philosophizing is designed hopefully to furnish a weak alibi for the manner in which the writer entered the White House, and for the nature of the impressions which hereinafter are set down.

Just as Phil Redeker might have predicted—and to his intense delight when he learned about it—your correspondent entered the White House head first.

Those big feet tripped over the first rug, a lovely spreadeagle dive ensued, and in we slid on our nose, somewhat to the astonishment of various gentlemen in striped pants, black coats, and spats.

And as if that weren't enough, out flew our hidden candid camera. It was immediately confiscated by two secret service men. We got a mild species of revenge, however, by demanding a receipt for it, pending the return from the interview.

And then we were ushered into The Presence.

Impressions:

"... Detroit, ah yes... air conditioning? ... well... it's so good to see you..."

First time I ever went around behind a man's desk before. But you have to do it, to shake hands. He doesn't rise from that chair. Has a good grip to his handshake, and a grand smile.

The one-two-three sequence when he meets you is something to see: (1) the lifted chin; (2) the lifted

eyebrows; (3) the outbursting smile—click, click, click.

"... now on our new \$3,888,000,000 bill..."

By golly, there's the chance of a lifetime, and those sos-and-sos took my camera. Darned if his shirt isn't unbuttoned at the navel. Eleanor must be out of town again.

"... won't conflict with private enterprise, because it will do things private enterprise can't, hasn't, or won't try..."

Lookit the donkeys. Count 'em. Lessee, must be around two dozen miniature donkeys, all different. Well, some people collect miniature elephants. Lots of ship's dinghies, too, binnacles, compasses, and suchlike. And the Great Seal, in a little box. Papers galore on that littered desk.

"... toll roads... right of eminent domain can't be exercised by corporations... formula worked out by Al Smith and Bob Moses..."

He certainly talks well. Smooth flow of language. That famous voice isn't so mesmerizing at close range, though. Vacuum tubes must do a lot for it. But what an extemporaneous speaker! Has a great fund of facts and ideas, well marshalled, winningly expressed. A salesman, gentlemen, a salesman!

"... PWA is popular with Congressmen... they like that 45% handout... in the long run it isn't sound... should be self-liquidating..."

Hey! Did I hear aright? The handout isn't a sound policy? Somebody must have broken through the Inner Circle of advisers.

"... perfectly natural to charge all the traffic will bear... human nature..."

Well, when this fella gets through down here—if he ever does—he could have quite a career in Hollywood as a character actor. What an expressive face, and how he uses it! It's deeply lined. Crisscrossed. Can't tell whether it's from suffering, or worry, or just the mobile uses to which he puts it.

"Now if you or I were Hitler at this point, we'd go to Senor X and say, 'frightfully sorry, old fellow, but'..."

Fascinating to watch his movements. Apparently artless, probably not. Scratches back of neck, twists head, thrusts jaw, shifts shoulders like a fighter, lights cigarette, jams it into holder, and lets it burn down to end so that he has difficulty getting butt out of holder. Eyebrows working continually.

"... so glad... must come again... regards..."

Hmmm, lovely office, all in white. With its Currier & Ives prints, its outlook on the White House grounds, and its colonial grace, it's as pleasant in aspect as one of those interiors you see in a hearth-and-home magazine. But no air conditioning. Reception rooms are air conditioned, but not FDR's office. Should have asked him about that. Well, mebbe another time...

### The Just & the Unjust

(Aug. 2, 1939)

One of the fine things about working in the refrigeration industry during the last decade has been the fact that so many first-rate men have found their livelihood in it. A man who gets around in the industry has the opportunity of forming friendships which he wouldn't exchange for any monetary consideration.

Every once-in-a-while you run into some fellow who used to be in the business but who, for some reason or other, left it for some other field. Always you find him a victim of nostalgia. It isn't the industry he yearns for so much—he may be making more money at what he is doing—but it's the friends he used to see so much.

"How's old So-and-So doing?" he'll ask. "And does Jim Bim still put on his Chinese salesman act at conventions?"

Those of us who are in the industry, however, don't always count our many blessings in the form of friends. Sometimes we have to be jarred out of taking them for granted—jarred out of our complacency by the grim fact that we'll never see them again.

And always you wonder: "Why did it have to be Joe? Why did such a swell fellow have to go?"

### Victor Sales & Supply Co.

Philadelphia, Pa.

Since Jan. 1, 1933

Wholesale Supplies Only

Congratulations to the News

What the  
serviceman  
should know  
about "VIRGINIA"  
REFRIGERATION  
products

### "EXTRA DRY ESOTOO"

(B.P. +14°F.)

"Extra Dry" is the refrigeration grade SO<sub>2</sub> that service and maintenance engineers have endorsed for more than 20 years. Comes in all popular cylinder sizes.

### "V-METH-L" (B.P. -10.7°F.)

Virginia Methyl Chloride is made specifically for refrigeration use. Low moisture content, low acidity and narrow boiling range recommend "V-Meth-L" for the most exacting requirements.

### "FREON" REFRIGERANTS

"FREON-113" "FREON-114" "FREON-11"  
Boiling Point Boiling Point Boiling Point  
117.6°F. 38.0°F. 74.7°F.

"FREON-12" "FREON-22"  
Boiling Point Boiling Point  
-21.6°F. -41.4°F.

Virginia Smelting Company is distributor for "Kinetic" Chemicals "Freon" Refrigerants and for "Suniso" Refrigeration Oils.

TO CHARGE A SYSTEM, USE REFRIGERANTS THAT ARE  
CONSISTENTLY PURE, CONSISTENTLY SURE

HOW TO SEAL CASES,  
INSPECTION PLATES, PIPE OPENINGS



When you seal out moist air, you prevent condensation, corrosion and insulation troubles. The outstanding seal, the one

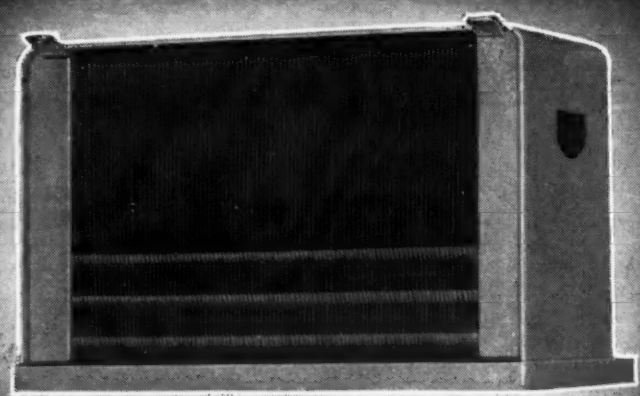
preferred by service and maintenance engineers, is Permagum. Brown Permagum comes in 2½-lb. and 45-lb. slugs. Adheres to any dry surface. Never hardens; stays plastic from 0° to 350°F.; absolutely odorless. Gray white Permagum comes in rolls containing 80 ft. of ¾" cords. Seals around wiring; won't attack rubber. Never hardens; odorless; can be painted immediately.

**VIRGINIA**  
Refrigerants

ASK YOUR WHOLESALE  
OR WRITE  
VIRGINIA SMELTING  
COMPANY

WEST NORFOLK, VIRGINIA  
PHILADELPHIA • NEW YORK • BOSTON  
CHICAGO • DETROIT • ATLANTA

## BETZ UNIT COOLERS



Compare

MODEL	BTU CAPACITY			CFM	SURFACE SQ. FT.
	At 1° TD	At 12° TD	At 15° TD		
260UC	260	3120	3900	485	82.34
347UC	347	4164	5205	680	109.39
443UC	433	5196	6495	760	121.49
540UC	540	6480	8100	995	154.13
688UC	688	8256	10320	1260	204.19
867UC	867	10404	13005	1670	256.50
1080UC	1080	12960	16200	1975	307.92
1490UC	1490	17880	22350	2770	443.14

Sold by Leading Wholesalers

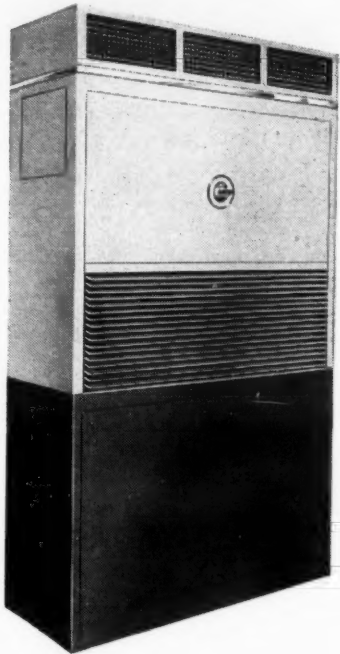
**BETZ CORPORATION**

HAMMOND • INDIANA

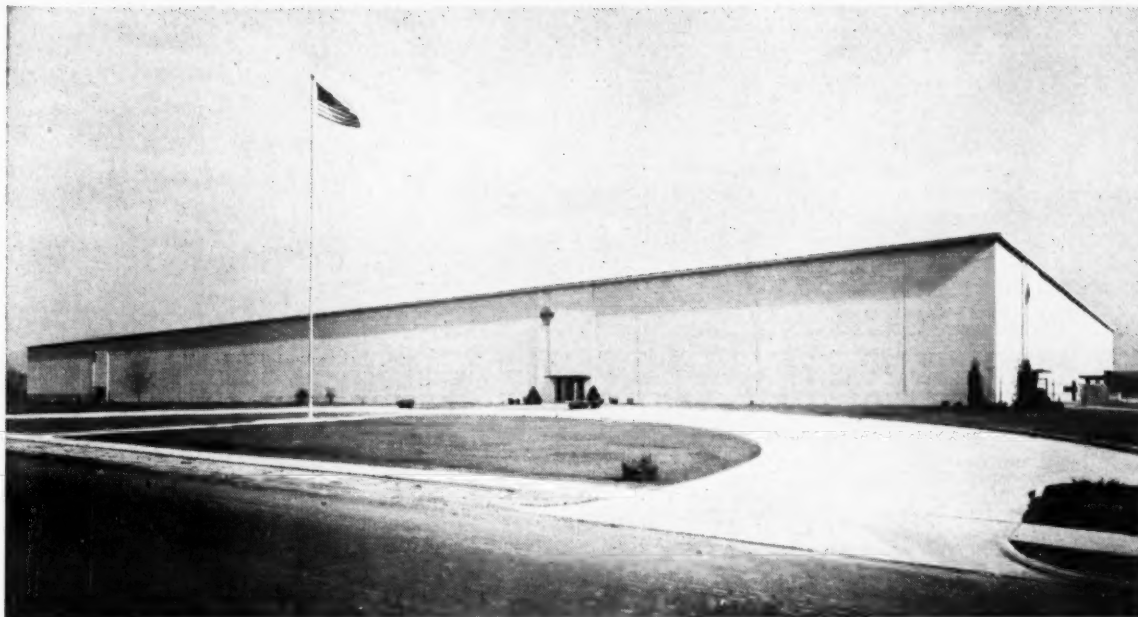


# Chrysler Airtemp — TRAIL BLAZER OF THE INDUSTRY

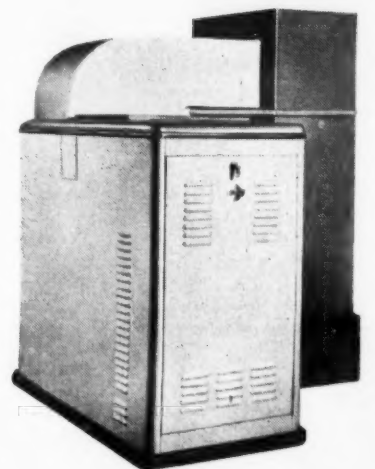
## FIRST WITH THE FINEST IN TEMPERATURE-HUMIDITY CONTROL



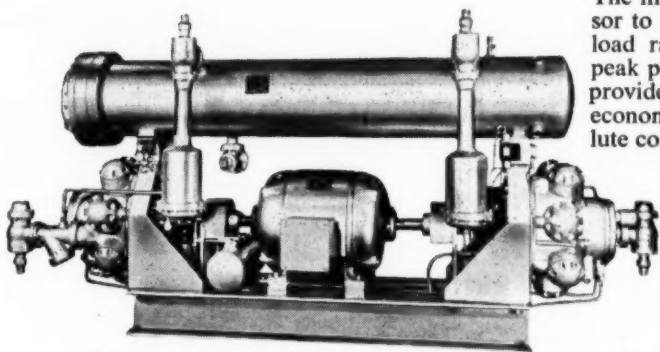
**"PACKAGED" AIR CONDITIONER** — the FIRST self-contained air conditioning unit ever to be offered to the public. Chrysler Airtemp holds the original patents on this type of unit. Often imitated, never equalled, it is the FINEST unit on the market.



**CHRYSLER AIRTEMP FACTORY** — The FIRST windowless, completely air conditioned plant ever built for the manufacture of heating and air conditioning equipment.

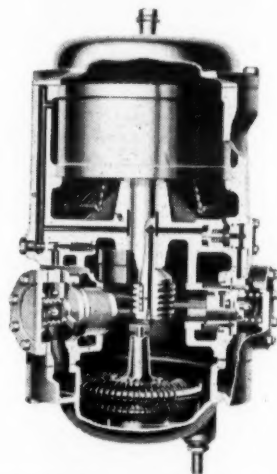


**YEAR-ROUND AIR CONDITIONER FOR HOMES** — FIRST offered by Chrysler Airtemp, this system combines an efficient, economical Chrysler Airtemp heating plant — for gas, oil or coal — with the world-famed Chrysler Airtemp "Packaged" Air Conditioner. The same ductwork can be used for both heating and cooling.

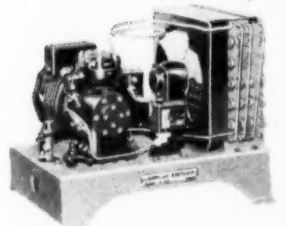
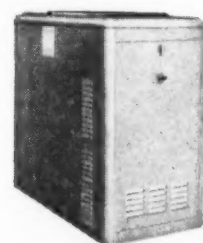
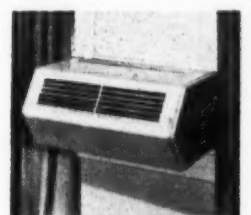


### CAPACITY REDUCTION METHOD

—Created by Chrysler Airtemp engineers, this system is used on large central station installations. The method allows the compressor to work only at the required load rather than continually at peak performance. This not only provides much greater operating economies but also permits absolute control of temperatures.



**HIGH SPEED RADIAL COMPRESSOR** — FIRST developed by Chrysler Airtemp, it is hermetically sealed to lock out dirt, dust, moisture and other damaging agents which tend to shorten the life and decrease the efficiency of ordinary compressors.



In 15 short years, Chrysler Airtemp, starting from scratch, has earned recognition as one of the most potent forces in the heating and air conditioning industries. The Chrysler Airtemp "Packaged" Air Conditioner outsells all others. In fact, much of the progress of the air conditioning field can be attributed to Chrysler Airtemp's efforts. It was the development of the self-contained unit that brought air conditioning within the reach of the modest home owner and small businessman. Chrysler Airtemp is continuing to develop new products and improve its present ones. You can be the FIRST to bring the FINEST in heating and air conditioning to your territory with a Chrysler Airtemp dealer franchise. Mail coupon today for full details about the lucrative Chrysler Airtemp dealer sales agreement.

**ALL-SEASON LINE OF PRODUCTS** — Chrysler Airtemp was the FIRST manufacturer to offer dealers a year-round line of products to sell. The holder of a Chrysler Airtemp franchise has no need to worry about slack selling seasons. He has products in his inventory to meet the demand of every month of the year.

# Chrysler Airtemp

HEATING • AIR CONDITIONING • REFRIGERATION  
AIRTEMP DIVISION OF CHRYSLER CORPORATION

DAYTON 1, OHIO



Airtemp Division, Chrysler Corporation,  
Dayton 1, Ohio

AC&RN-9-51

Please send me complete information on how I can become a Chrysler Airtemp dealer.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



"As war clouds became ominous on the American scene, the NEWS began offering practical assistance to guide the industry in this new problem."

## How To Sell To The Navy

By George F. Taubeneck

Most gratifying feature of America's rearmament program, from the standpoint of manufacturers in the refrigeration and air conditioning industry, is that the policy is to spread orders among as many plants as possible.

As the army and navy experts see it, in time of war our armament production would have to be expanded enormously. America's industrial plant is the best in the world, but it's out of practice on war production. Hence, some practice should be given this year to as many factories as possible, so that all could get into the swing fast if we become involved in somebody else's problems again.

Partly because so many manufacturers will have the army in mind when looking for rearmament orders, and partly because the navy buys so many different varieties of supplies, it can be suggested that manufacturers see the navy first.



"The 'I-can-get-it-for-you-wholesale' idea was spreading rapidly and becoming a serious problem for legitimate outlets."

## Distributors From Coast-to-Coast Go Into Action Against Discount Buying, Cut-Price Selling

High humidity in household refrigerators comes into the picture with Frigidaire's new line for 1939."

### NEW 'COLD-WALL' PRINCIPLE USED IN SIX TOP-PRICE FRIGIDAIRE MODELS

DAYTON—The "radiant" principle of heat transfer makes the entry into the field of household electric refrigeration in the "Cold Wall," standout feature of the six top models in Frigidaire's 15-unit line for 1939.

By means of a solid glass partition, called the "dew fresh seal," the cabinets of "Cold Wall" models are divided into two compartments. In the upper compartment, the conventional evaporator freezes ice and makes cold, as usual.



"More and more packaged equipment was coming into the commercial refrigeration field."

### Westinghouse Offers Package Commercial Units in '39

Westinghouse recently introduced its 1939 line of "packaged" commercial refrigeration equipment. Some models are available for remote-type installations, including a two-compartment milk-cooling cabinet with condensing unit and agitator mechanism mounted on the top.



"Developments in the next 12 years confirmed the predictions made here."

### Emphasis Placed On Package Line In York's Plans

NEW ORLEANS—"The future of air conditioning is in the package equipment field," declared S. E. Lauer, vice president in charge of sales of the York Ice Machinery Corp., speaking before the southern regional convention of the company here last week.

"Operating costs so small that they're hardly noticed still make excellent sales points."

### 2.8 Cents Per Day For Refrigeration, Home Tests Show

CLEVELAND—Average cost of only 2.8 cents per day for operating an electric refrigerator in the Greater Cleveland area has been established as a result of a series of tests conducted recently under the supervision of the Electrical League of Cleveland.

Tests were made in homes and under regular use conditions, and involved models of 6 to 8-cu. ft. capacity. Individual electric meters were connected to each test unit.



The 1939 New York "World's Fair" gave refrigeration manufacturers a chance to show their products to visitors from all over the world. The Westinghouse 'Elektro-Motor' man greets Aquacade star Johnny Weissmuller. That's Gertrude Ederle seated at the center.



"Indicating the continuing growth of the frozen food industry was the formation of National Frosted Food Institute to promote frozen foods and educate both public and distribution channels as to their value."

## Proper Retail Store Refrigeration Is Called 'All-Important' As Food Processors Form 'Frosted Food Institute'

"An editorial in the NEWS called attention to the quiet but accelerated growth of commercial refrigeration, which continues to find new markets where it can be of profitable service."

### CHANGING PICTURE IN COMMERCIAL REFRIGERATION

Nema figures on manufacturers' sales of commercial refrigerating units no longer give a fair idea of the size of this branch of the refrigeration industry.

Three or four newcomers among the commercial refrigeration manufacturers have, in the last two or three years, done so much business that the true growth of commercial refrigeration hasn't been reflected in the statistics issued by the National Electrical Manufacturers Association.

These newcomers have utilized new sources of distribution. They have also specialized in brand new types of consumer markets.



"High humidity was likewise one of the aims of Norge in mixing two refrigerants, company engineers explained."

### NEW NORGE UNIT FEATURES USE OF 2 REFRIGERANTS

"All new products have to fight some type of opposition, it would seem."

### Heating & Piping Association Raps Unit Conditioners

CHICAGO—"We have not believed that the 'unit air conditioner' was the solution to many of our problems," declared J. Lawrence DeNeille of St. Louis, reporting for the Committee on Air Conditioning of the Heating, Piping & Air Conditioning Contractor's National Association at the annual convention of that organization here last week.

"The frozen food industry was to receive considerable help from locker plants, and vice-versa."

## Frozen Foods, More Service To Users, Called Key to Locker Plant Growth



"Engineering commercial installations sometimes involved difficult piping problems, so experts did their best to make it easier for the men in the field."

### New Chart Simplifies Accurate Selection Of Correct Piping and Tubing Sizes For Commercial Refrigeration Installations

"Automobile air conditioning becomes a definite reality."

### Packard Introduces Car Cooling Unit As An Accessory

DETROIT—First announcement of an air conditioning system using mechanical refrigeration, installed on passenger cars as a standard, factory built, extra-cost accessory, was made by the Packard Motor Car Co. Using a reciprocating compressor driven from a pulley on the fan belt shaft, the new system develops 1½ tons of refrigeration at 60 miles per hour, and 2 tons at 80 miles per hour.

"Whether to set up factory branches or work through independent distributors was a problem for manufacturers."

### NORGE BACKS DISTRIBUTOR SET-UP; MORE STORAGE SPACE IN '40 LINE

DETROIT—Endorsement of the distributor type of operation as against factory-controlled branches or direct-to-dealer selling was voiced by Howard E. Blood, Norge president, in talks at the company's annual convention here last week.

"We have not grown up as branch operators," Blood declared in opening the four-day Norge merchandise clinic.

"We definitely think the distributor system is sound and good, and that we can maintain distributor grosses which will warrant good men staying in that business for many years to come."

"Recognition must be given to the refrigeration industry's new customer, which was to have a phenomenal growth in the war years ahead."

### LOCKER MEN TO TRADE IDEAS IN NEW ASSOCIATION



# SPORLAN

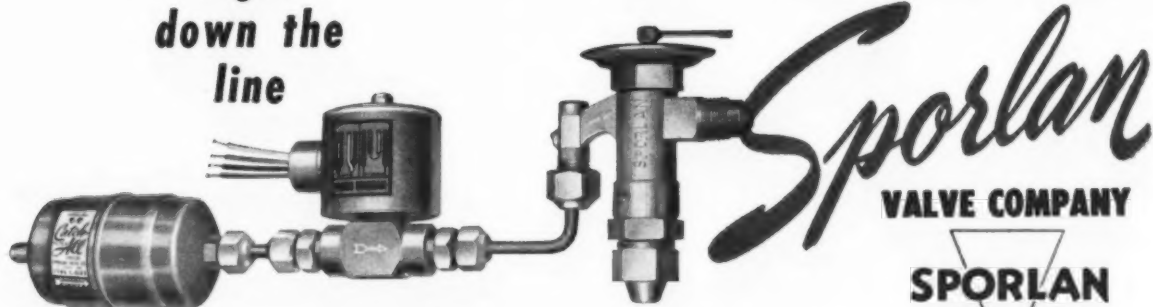
## FILTER-DRIER

does it again!



... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...  
... and the only manufacturer of...

for PEAK PERFORMANCE  
on all installations  
... buy Sporlan  
right  
down the  
line



7525 SUSSEX AVENUE • SAINT LOUIS 17, MISSOURI

SPORLAN  
VALVE COMPANY







Philco's "Coolwave" styled window-type room air conditioner marked the start of that company's aggressive activity in the room cooler field.



(We just had to stick this one in here.)

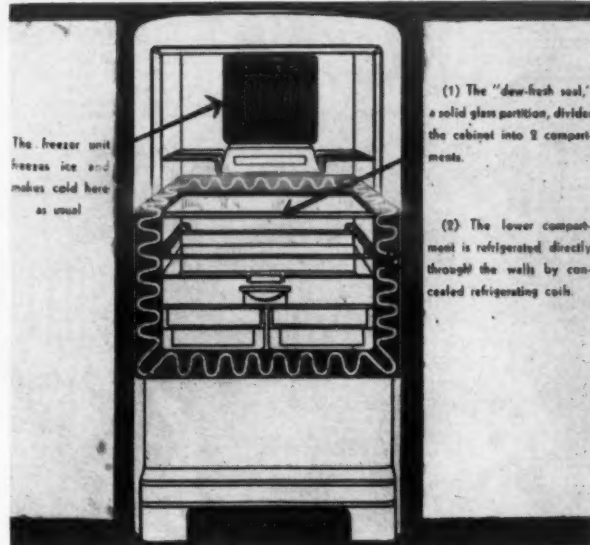
### Better Than Fly Paper

The general manager of H. G. Hill Co. at Nashville, Tenn., who has just authorized the installation of another Lipman air-conditioning system in one of the company's Super-Stores, advances some unusual reasons for the purchase.

One of these is that the air-conditioned store will experience much less trouble with flies. Modern heating eliminated the pot-bellied stove, with its attendant cracker barrel, and now air conditioning banishes the long curls of suspended fly paper so common in the oldtime general store.

A second reason given by the Hill manager for the purchase of air conditioning (case and cooler manufacturers please note) was that less trouble will be experienced with the "sweating" of refrigerated cases.

Frigidaire's first "Cold-Wall" household refrigerator models were introduced in 1939, with refrigerant coils in the cabinet walls to "high-humid" cold conditions for storage of perishable foods.



### Tecumseh Co. Completes 'White' Assembly Plant

"Cleanliness is vital in manufacturing refrigerating units, thus filtered air, white paint, and uniforms come into the picture."

"This represented an important break in the price structure. Similar models had sold for \$400 the preceding year."

### CARRIER ROOM COOLER PRICED AT \$237.50

"Up to this point it had been called the Refrigeration Supplies & Parts Manufacturers Association, but the organization voted to substitute 'Equipment' for 'Supplies & Parts.'"



"Whether frozen foods should be displayed or merely kept in storage cabinets and who should sell the cabinets were important questions of the time."

### DISPLAY VS. STORAGE TYPE CABINETS

"Frozen Foods Distributors More Interested In Selling Cheap Cabinet Than Foods"—Corbett

## Parts Makers Association Now Known as Rema

"Another manufacturer comes out with a two-temperature system designed to maintain high relative humidity in the regular food compartment."

### Two-Temp Unit Shown

CINCINNATI—After giving the Crosley car the onceover at the Indianapolis Speedway, a number of Crosley distributors moved over here Friday to see the first two-temperature Crosley refrigerators to come off the production line.

The two-temperature jobs will sell for \$15 to \$20 more than their comparable Crosley models. They will bear the trade name of "Crosley Freezorcold."

The food compartment of the "Freezorcold" is divided, with separate evaporators for each. Top compartment is the cold one, maintaining temperatures from 5° below zero to 18° above, and running normally at 10° above. Bottom compartment is refrigerated by a secondary system and maintains from 80 to 85% relative humidity.

"Who should sell what to whom is something that's cropped up from time to time in this comparatively youthful industry where distribution patterns are ever changing."



### Guild Accuses Jobber Of Direct Selling

NEW YORK CITY—Action has been taken by the Refrigeration and Air Conditioning Guild, organization of refrigeration service firms in the New York area, in the case of a refrigeration parts and supply jobber who has allegedly been selling and installing refrigeration machines direct to the user, and who, it is claimed, is even using employees of some of the service firms to do the work for him.

Facts in the situation have been collected and submitted to the National Refrigeration Supply Jobbers Association.

"The War Department's crystal ball, it later developed, must have been a bit cloudy, to say the least."

### NO EFFECT SEEN ON REFRIGERATION IN U.S. WAR PLANT

"Evidence is still not conclusive, but this prediction is getting serious study today."

### Television May Change Retail Advertising, Baker Predicts

RYE, N. Y.—Possibility that television may revolutionize the entire retail advertising picture by bringing housewives a daily animated presentation of a store's wares in a fashion made possible by no other medium was voiced by Dr. W. R. G. Baker, head of General Electric's radio and television department, in a talk to members of the Association of National Advertisers.

# KRAMER

## Celebrates

# 37

## FRUITFUL YEARS

# THERMOBANK

1,400 to 120,000 BTU's Per Hour

## UNEQUALED ACHIEVEMENT

37 years of creative achievement in the field of refrigeration and heat transfer has made the KRAMER "trade mark" the Standard of the Industry. The resourceful pioneering in our Research Laboratory makes the KRAMER "trade mark" important to YOU. It assures you of products that will out-perform all others.

# KRAMER TRENTON CO. • Trenton 5, N.J.









"This editorial gave a pretty accurate picture of what was happening in commercial refrigeration and air conditioning, and of future trends."

## 'Package Units' Hold Spotlight

Coincidental with the announcements of weddings between commercial refrigeration and air conditioning departments of large companies like Frigidaire, General Electric, York, Kelvinator, and Servel, come tidings of a trend toward "package units" for both commercial refrigeration and air conditioning.

Concerns such as these haven't been getting the volume they think they should on either item. They believe that "package units" will be easier to sell, will stay sold better, and can be sold cheaper.

As for commercial refrigeration, some of these concerns have been pushed pretty hard by comparatively new competitors with lower prices, longer discounts, new channels of distribution, and aggressive promotion.

These new companies have jumped to their commanding position by cultivating the replacement market through the jobber and service man. The service firms and the jobbers are generally the first to know when a unit needs replacement. Unable to get units from the "old line" manufacturers, they have turned toward new sources.

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

#### TRANE WILL SELL 2 REFRIGERATING MACHINE LINES

Puffer-Hubbard Markets  
Dry-Storage Type  
Beverage Cooler

#### BRADFIELD & BOYDSTON BUY COIL COMPANY

Five 'Package' Units  
Launched By Lipman

Evaporator Application  
Cataloged by 'Recold'

LOS ANGELES—Evaporators for all refrigerants and for a great variety of applications are listed in the latest catalog of "Recold" evaporators manufactured and distributed by Refrigeration Engineering, Inc.

#### PENDERGAST NAMED V. P. OF UNIVERSAL COOLER

Philco Television Line  
To Be Shown June 5

All 1940 Crosley Models  
Have 'Freezercold' Storage  
Compartment for Frozen Food

#### LAWSON TO KELVINATOR

New Lines Shown To  
Tyler Distributors

Larsen, Shantz Move In  
Tecumseh Organization

Brunner Co. Equips Many  
Exhibits at N. Y. Fair  
With Cooling Units

#### Year-Around Controller Introduced by M-H

#### LANDMESSER NAMED YORK COMMERCIAL SALES MANAGER

Bratten Heads Frigidaire  
Household Sales Div.

'Kramer-Trenton Co.' New  
Name of Coil Firm

TRENTON, N. J.—Kramer Trenton Co. is the new firm name of Trenton Auto Radiator Works, manufacturer of Kramer refrigeration and air conditioning equipment.

#### GRUNOW COMPANY BANKRUPT; COURT NAMES RECEIVERS

W-Type Compressors For Upper  
Floor Mounting Introduced By  
York on Country-Wide Tour

Crosley Makes Absorption  
Unit Using Kerosene

Flexible Tubing Said  
To Be Oil Resistant

NEW YORK CITY—A new type of flexible tubing said to be impervious to gasoline, oil, and organic solvents, has been introduced by Resistoflex Corp. here.

Curtis Designs Packaged  
Store Conditioner

Precipitator Announced  
By American Air Filter

HATCH & FLANNERY BUY  
CONTROL OF BUSH CO.

## 1939



"As the war clouds grew darker over Europe, a new industry 'baby' was being born, one that was destined to become a big strapping boy."

#### New 'Home Freezing Chest' Has Blower Unit In Lid of Freezer Compartment

UTICA, N. Y.—"Home Freezing Chest" is the name given to a self-contained combination freezing and low temperature storage cabinet being introduced by Emil Steinhurst & Sons, Inc., and which is claimed to be suitable for institutional, farm, and home use.



"Appliance dealers were harassed by price cutters and some banded together to try and do something about it."

#### OAKLAND DEALERS OUTLAW 2-FOR-1 APPLIANCE DEALS

Combination Sales Called  
Incentive To Wave  
Of Price Cutting

OAKLAND, Calif.—Use of "combinations" in the promotion of household electrical appliances has been outlawed by members of the Appliance Dealers Protective Association of Alameda and Contra Costa counties as a practice tending "to undermine the public's confidence in price structures."

"The Nazis had overrun Poland, so the industry was wondering what was next."

#### War May Not Hurt Cork Supply; Effect On Enameling Seen

LANCASTER, Pa.—War developments in Europe have caused the U. S. War Department to specify cork as a "critical material," says H. W. Prentis, Jr., president of Armstrong Cork Co.



"There's been no change in the trend."

#### STORE COOLERS GAIN IS BIG IN DETROIT

DETROIT—Air conditioning sales reports to the Detroit Edison Co. during the first 11 months of 1939 show a marked increase over previous years in the number of self-contained installations, according to Sterling S. Sanford, air conditioning engineer for the company.

Sales of store-cooling units were almost double 1938, indicating a definite trend toward the use of this type of equipment.

"The science of water cooling was also making significant advances."

#### Radical Design Used For New Cooler of Instantaneous Type

CHICAGO—Incorporated what is claimed to be an entirely new principle in methods employed to provide cooled water for carbonated beverage manufacture, the "Red Diamond" water refrigerating unit has just been introduced by the Liquid Carbonic Corp.

### The Name: AIRO SUPPLY COMPANY

2732 N. Ashland Ave.  
Chicago 14, Ill.

### The Products: REFRIGERATION and AIR CONDITIONING UNITS—PARTS— TOOLS—SUPPLIES

### The Catalog: FREE—SEND FOR IT!



### The Service:

Fast, world-wide, low-cost deliveries. Large, complete stocks  
**WHOLESALE ONLY**  
Ask for catalog on your letterhead

### AIRO SUPPLY CO.

2732 N. Ashland Ave., Chicago 14, Ill.



let **KOLD-HOLD** send you  
**this completely new catalog of  
cost-cutting refrigeration ideas**

This new Kold-Hold Catalog is full of ideas for improving the efficiency and convenience of refrigerated rooms, cabinets and trucks . . . at real savings in cost. You should see the suggestions it has for making your present processing, storage and cooler rooms more useful and effective. If you're planning new refrigerated rooms, you'll be interested in Kold-Hold Plate Banks and Kold-Hold Plate Stands. The section on truck refrigeration describes the modern "Hold-Over" principle of maintaining predetermined temperatures in trucks throughout the longest day's trips. And shows how this is done for as little as 10c a day. Valuable every-day refrigeration information is included that simplifies the job of determining your refrigeration needs. You will find charts for computing plate requirements; tables of air infiltration loads; a list of the specific and latent heats for many perishable foods; and heat leakage factors of common types of insulation. You can have all this absolutely free. Just fill in the coupon below. Don't delay, act today!

See us at Booth 94  
AMI Show

**Congratulations  
to the  
"NEWS"  
on its**

**25th ANNIVERSARY**

**LARSON SUPPLY CO.**  
ALLENTOWN, PA. - READING, PA.  
Servicing Eastern Pennsylvania Since 1935

**KOLD-HOLD**

protects every step of the way

KOLD-HOLD MANUFACTURING CO.  
300 E. Hazel St., Lansing 4, Michigan

NAME.....  
FIRM.....TITLE.....  
ADDRESS.....  
CITY.....STATE.....





"Kelvinator's move in limiting its number of models and number of dealers, plus some drastic price cuts, set off some merchandising fireworks, as other manufacturers came out with new low prices."

## Kelvinator & Leonard Prices Cut, 1940 Lines Limited

DETROIT—A new manufacturing and selling plan by which Kelvinator and Leonard electric refrigerators will be sold to the public at delivered prices from \$30 to \$60 less than 1939 prices was announced at the com-

bined convention of the companies' distributors.

One of the most noteworthy features of the plan is that the company has concentrated 96% of its production on 6 and 8-cu. ft. models.

## Crosley, General Electric, Norge and Westinghouse 1940 Retail Price Schedules Dive to All-Time Lows

"The second All-Industry Show was an unqualified success, with attendance and buying interest at a high level."

### 7,500 Jam 2nd All-Industry Exhibition

CHICAGO—With a registered attendance of 7,542 persons, and with many exhibitors carrying home sheafs of orders taken during the show, the Second All-Industry Refrigeration & Air Conditioning Exhibition closed its four-day run last Thursday with both exhibitors and visitors pronouncing the show an unqualified success.



"Some people think it costs a lot of money to run an air conditioning system, but cost figures from actual installations prove otherwise."

### 30-Ton Air Conditioning System In Oklahoma Runs for \$1.69 Per Day

MUSKOGEE, Okla. — Operating costs of a 30-ton air conditioning system serving two floors of the Barnes building here averaged \$2.49 per day through the summer months and \$1.69 per day year-round.

According to Michael Barr, engineer for Durnil's (Carrier distributor), which made the installation, the Barnes building was a compressor capacity of 30 hp.; with fans, pumps, and auxiliaries making a total of 36 installed horsepower. Operating cost for the months of April through October was proven on a check meter to be \$534.28 or \$2.49 per day.



"The window-type room cooler had been pooh-poohed in some circles, but this editorial reflected a changing attitude."

## WINDOW-TYPE AIR CONDITIONERS FIND A MARKET

Old settlers in the air-conditioning business can recall when the window-type air conditioner was a joke. It was unscientific, it wouldn't do a job, it was merely a "shoebox with a fan and a wet rag," which shady characters sold under false pretenses to sully the fair name of air conditioning.

"Them days," to borrow the patter of the radio comedian, "has gone forever." Window-type air conditioners are not only eminently respectable today, but they have become the "white hope" of both manufacturers and distributors.

But the window-type air conditioner can be installed by anyone, its installation does not disorganize an office for days or weeks, it needs practically no attention, it can be sold by specialty methods, it can be made relatively quiet, it uses no water, it brings in fresh air, it doesn't take up floor space, and neither its initial price nor its cost of operation are prohibitive.

### 'Add-A-Unit' Display Cases and Coolers New In Hill Line



My, my, skirts were really short in 1940, and it made for interesting shots when "live models" were used in pictures introducing "new models" such as this styled console-type General Electric room air conditioner.

"The long compartmented display cases began to make their appearance in the ever-growing number of supermarkets."

### Two-Compartment Display Cases Feature of Huge St. Louis Market Job

ST. LOUIS—What is believed to be one of the largest single installations of refrigerated display equipment has been made in the Hampton Village Super Market.

The market has 18 refrigerated cases built by Hussmann-Ligonier to individual specifications, including a number which have two compartments in a single case, made by inserting a hermetic glass panel.

"Frozen food cabinet manufacturers began to pay more attention to getting the 'display factor' into their product."

### 2 Models In Kelvinator Ice Cream Cabinet Line Built For Frosted Foods Storage

DETROIT—Featured in the Kelvinator ice cream cabinet line are 8 and 12-hole models for use as frosted food cabinets. These are equipped with dispensing baskets and illuminated display boards which make them easily convertible into frosted food merchandising units.

On each side of the display boards are five large, colored, frosted food illustrations printed on translucent material and lighted from the inside. Below the illustrations are metal channels that provide space for item slides listing the products.

### Westinghouse To Introduce New Automatic Washer

## 'Fortune' Doesn't Pry Many Startling Facts From Smart Refrigeration Men

DETROIT—Fortune Magazine's much-feared "expose" of the household refrigerator business didn't turn out to be so startling after all. For the last two months, rumors have been floating around the industry that Fortune would "tell all" in the May issue, that sources of inside information had been tapped, and that the rattling of the skeletons in the closet would be exceeded only by the

rattling of executives' knees as they quaked in their boots.

Under the title, "Refrigerator Price War" in the index, and "The Nudes Have It," on the first page of the article, the Fortune story contains little that readers of the NEWS haven't read already—except for a "standing of the clubs" set of sales statistics by manufacturers, which is reprinted on page 2 of the NEWS.

### Sales By Manufacturers By Fortune Magazine U. S. Household Refrigerator Sales (Est.)

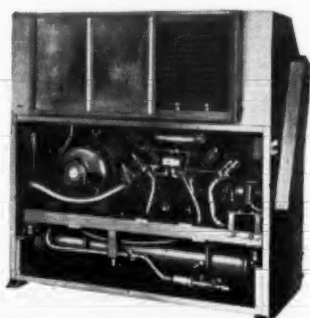
	1937 Units	%	1938 Units	%	1939 Units	%
Frigidaire .....	504,000	21.8	259,000	20.6	340,000	17.7
Montgomery Ward (unit by Frigidaire) ..	80,000	3.5	60,000	4.7	105,000	5.5
General Electric .....	375,000	16.2	193,000	15.3	330,000	17.1
Hotpoint (made by G-E) ..	52,000	2.2	37,000	2.9	62,000	3.2
Coldspot .....	258,000	11.2	205,000	16.2	285,000	14.8
Westinghouse .....	250,000	10.8	93,000	7.4	194,000	10.1
Kelvinator-Leonard .....	247,000	10.7	96,000	7.6	139,000	7.2
Norge .....	199,000	8.6	92,000	7.3	108,000	5.6
Crosley .....	84,000	3.7	49,000	3.9	77,000	4.0
Others .....	187,000	8.1	85,000	6.7	179,000	9.3
Nonmembers of Nema (National Electrical Manufacturers Assn.) ..	74,000	3.2	94,000	7.4	106,000	5.5
Total domestic sales ..	2,310,000		1,263,000		1,925,000	
Exports of Nema .....	191,000		167,000		160,000	
Total World Sales by all U. S. manufacturers ..	2,501,000		1,430,000		2,085,000	

# Now More Than Ever

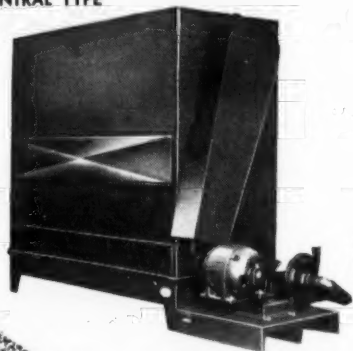
It's **Curtis** for PROFITS



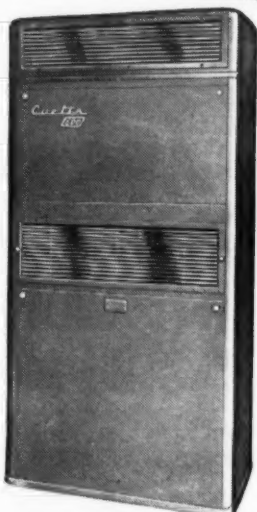
Because Most Installations are Within the Curtis Range — 2 through 40 Tons



10 and 15 Ton Complete CENTRAL TYPE



Evaporative Condensers, Cooling Towers and Air Handling Units



2 through 8 Ton PACKAGED UNITS (Shipped to you completely assembled)



1/4 H.P. through 40 H.P. Condensing Units.

With these units, you can handle any AIR CONDITIONING — REFRIGERATION or AIR MOVING JOB within this range — and when the job is sold, it STAYS SOLD because the QUALITY IS THERE. No corners have been cut in the manufacture of Curtis equipment — pound for pound, it's the best buy in the industry.

VISIT OUR EXHIBIT . . . 7th All-Industry Refrigeration and Air Conditioning Exposition, November 5-8, 1951. Booth Numbers 431-435-436-442.

## Advertising Support A-Plenty

SATURDAY EVENING POST

TIME

NEWSWEEK

and many special consumer publications are pre-selling Curtis equipment to your prospects.



NOTE — A Curtis franchise may be open in your area.

Pin this to your letterhead and mail

CURTIS REFRIGERATING MACHINE DIVISION  
of Curtis Manufacturing Company  
1912 Kienlen Avenue  
St. Louis 20, Missouri

I am interested in Curtis line.  
Please send me complete information.



MY CUSTOMERS LIKE GARDEN - FRESH VEGETABLES!

SUCH A VARIETY TO CHOOSE FROM

NOLIN Moisturizer

KEEPS PRODUCE FRESH!

DAIRY PRODUCTS TOO!

• JUST RIGHT TEMPERATURE  
• JUST RIGHT HUMIDITY

Write for Free Literature  
Franchises Available in Some Areas

Contact NOLIN BROS. MANUFACTURING COMPANY  
1100 MADISON AVE. • MONTGOMERY, ALABAMA

**Curtis**

97 Years of Successful Manufacturing



### A Chart To Convince Users on 'What's Necessary'

Amog Refrigeration Service		The chart below guides our		Modernize	
Job Name	Rose and Murphy	service man in thoroughly	checking your Refrigeration	Repair	Modernize
Address	1020 2nd Ave.	System. His recommendations	are indicated.	Adjust	Replace
COMPRESSOR	OK	EVAPORATOR			
Seal		Dirty		X	
Gaskets		Frost			
Shut-off valves		Refrigerant leak			
Discharge valves		Fan motor			
Suction valves		Baffles			
Lubricating oil		Drip Pans		X	
Belts		Condensate drain			
Bearings		CONTROL VALVES	None		
MOTOR	OK	Two temperature valve			
Brushes		Suction throttling valve			
Throw-out switch		Suction solenoid			
Armature		Liquid throttling valve			
CONDENSER	OK	Liquid solenoid			
Dirty		Check valve			
Refrigerant leak		TEMPERATURE	None		
Water valve		CONTROLS			
Fan motor		Power element			
Pump		Switch			
EXPANSION VALVE		PRESSURE CONTROLS			
Thermostatic		Bellows			
Automatic		Switch			
Low side float		Levelling			
High side float		Sequencing relay			
Power element		STARTING SWITCH	None		
Valve button		Overloads			
Valve seat		Coil			
REFRIGERANT		Contacts			
CHARGE	OK	Fuses			

### 'Check Chart' for Parts Visual Aid In Selling User

By A. B. Newton

One of the real problems in selling replacement parts is to convince the customer that a cash outlay is necessary. No matter how thoroughly a service man goes over a job, and how accurately he analyzes the trouble and recommends correcting steps, unless the customer appreciates it, his efforts may be in vain.

"This check chart telling when a replacement part should be used is one of the handiest helps we've seen for a contractor or serviceman."

Fig. 1 shows a tabulation of some of the major items which can be checked on the average refrigeration system, together with four suggestions as to the manner of correcting any difficulty which exists. Sale of replacement parts comes when you check "Replace" or "modernize."

"The thought that commercial refrigeration dealers should quit 'bidding' for jobs is a piece of advice that still holds good."

### REMOVE THE WORD 'BID' FROM THE LANGUAGE, AND THE COMMERCIAL REFRIGERATION DEALER CAN THROW AWAY HIS BOTTLE OF RED INK, SAYS AULSEBROOK

Servel Executive Says That Dealers Should At Least Remove It from Their Vocabulary, and Gives the Figures To Prove His Contention

\$5 Down, 5 Years To Pay, Basis of 1940 N. Y. Utility Drive

NEW YORK CITY—A "Triple Five" campaign on electric refrigerators and another "bargain package" drive on three selected appliances has been announced by E. F. Jeffe, vice president of Consolidated Edison Co., to representatives of cooperating dealers.

As its name indicates, the "Triple Five" campaign is built around three "big fives"—an allowance of \$5 on old iceboxes traded in on new automatic refrigerators, a down payment of \$5 on refrigerator sales, and credit terms of five years.

"Frozen sleep was another contribution of refrigeration to the medical world."

### Air Conditioning & Refrigeration Used In 'Frozen Sleep' Cure Of Drug Addict

DETROIT—Air conditioning and refrigeration equipment are both being used in the new "frozen-sleep" treatment employed by two Detroit medical men, who say they have succeeded in curing morphine addiction with the new method.

"The new interest in indoor ice skating and ice skating entertainment opened a new market for refrigeration."

### Indoor Skating Rinks Now Constructed With Small Direct Expansion Systems

OMAHA, Neb.—Indoor skating rinks are now being constructed with direct expansion low pressure refrigeration systems, using "Freon-12" as the refrigerant, according to Roger Sprague of the Baker Ice Machine Co. here. Two recent installations, one portable rink in the Hotel Fontenelle, Omaha, and the other permanent, in the Hotel Nicollet, Minneapolis, have been completed.

### International Harvester Aims Refrigeration Line at Farm Market

CHICAGO—In an extension of its manufacturing and merchandising activities in the refrigeration field, International Harvester Co. is placing on the market a line of walk-in and reach-in coolers designed especially for the farm market.

"Here was a call for creative selling in the air conditioning field—a call that still needs to be felt today."

### SPECIALTY SALES NEEDED TO BOOM AIR CONDITIONING

SKYTOP, Pa.—"The air conditioning sales organization must be a new kind of concern—a specialty selling contracting organization, and manufacturers will have to band and organize their collective outlets to eliminate marginal contractor competition, unless they are willing to assume the full responsibility of the creative selling of air conditioning on a national basis."

That is one of the principal conclusions reached by John deB. Shepard, air conditioning representative of Consolidated Gas Electric Light & Power Co. of Baltimore, after many years of intimate contact and study in the air conditioning field. Shepard presented his conclusions before the annual spring meeting of the American Society of Refrigerating Engineers.

"If you've never attended a refrigeration show in Canada, you've missed part of your education—in refrigeration and other things."

### CANADIANS PLANNING REFRIGERATION SHOW

TORONTO—A refrigeration convention and exhibition first of its kind in Canada, will be held by the Ontario Maple Leaf chapter of the Refrigeration Service Engineers Society on April 1 and 2 in the King Edward hotel.

Deepfreeze came into the field in 1940 with an unusual design of a home freezer and a merchandising program aimed at reaching the mass market for this new kind of home food preservation unit.



"After many years of conducting a leasing policy on frozen food cases, Birdseye decided that a better policy is to let the food retailer buy the case of his choice."



"Death of F. M. Cockrell in 1940 was an untimely end for the man who had founded the News and who had guided it through the early years."

### F. M. Cockrell Dies

DETROIT—F. M. Cockrell, founder and publisher of AIR CONDITIONING & REFRIGERATION NEWS and president of the Business News Publishing Co., died May 26 in Grace Hospital here.

Mr. Cockrell died following an operation which disclosed a ruptured appendix. He was 53 years old. He had been schoolteacher, electrical engineer, and publishing company executive before founding the NEWS.

## 25 years ago—

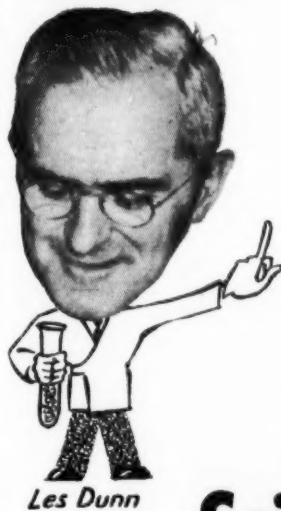
THE

ORIGINAL

"DFN TWINS"

pioneered

Scientific Drying



Les Dunn



"Chang" Chandler

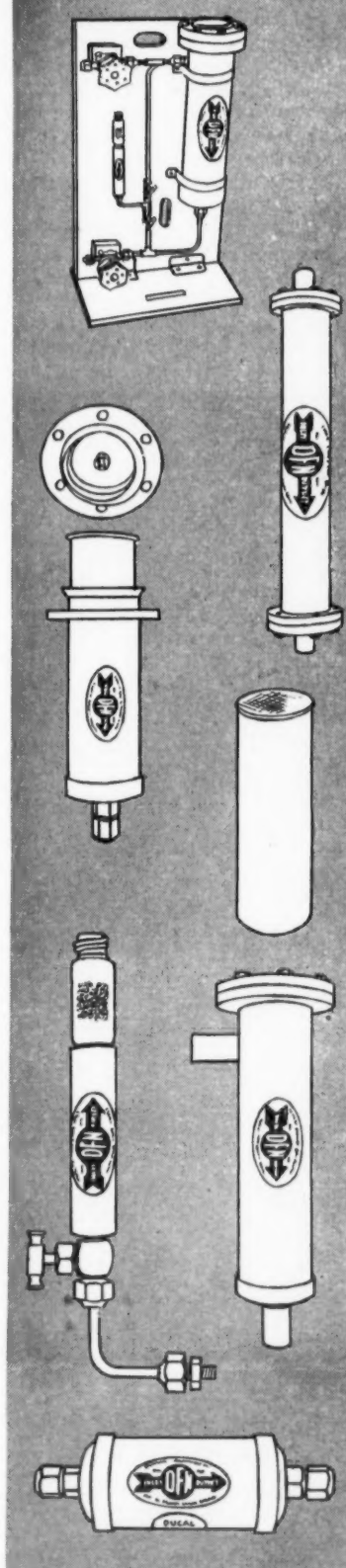
### ...AND THEY'RE STILL PIONEERING TODAY

YOU old timers may remember the first driers. Hardly more than a piece of pipe, some chemicals . . . and a prayer. The only way you knew a system was wet, was when it froze up. The only way to dry a system was by home made ingenuity.

DFN changed all that! Starting from scratch on a subject little known, we experimented, developed, constantly improved methods and products for the detection and control of moisture and foreign matter in refrigerating systems.

These 25 years of pioneering have produced many "firsts" in drying . . . the cartridge type drier—moisture indicator—moisture control unit—large-tonnage driers to 150 tons—high-capacity DC filter-driers—and the Drier-Graph to assure accurate drier selection.

We are specialists in drying—making driers is our sole business. This vast experience is yours for the asking on any problems of drying—the benefits are yours in every DFN drier.



Our 26th Year



McIntire Connector Co.  
265 Jefferson St. Newark 5, N. J.

**DRIERS** . . . all types and sizes, up to 100 tons  
MOISTURE CONTROL UNIT    MOISTURE INDICATOR  
STRAINERS    FILTERS

## Need More Plant Capacity?

Use Ours — let us do your rolling, stamping, finishing and assembling operations.

- LARGE WORK CAPACITY means favorable delivery. 93,000 sq. ft. floor space . . . over 100 stamping, rolling and finishing machines . . . tool and die facilities.
- SPECIALIZED SERVICE. Quality of Greene work reflects years of experience in both civilian and defense sub-contracting work.
- QUOTATIONS WITHOUT OBLIGATION. Send blueprints, or write or phone for personal call. Inquiries promptly answered.

G-13



**Greene of Racine**  
GREENE Manufacturing Company, Inc., Racine, Wis.





"Construction of blacked-out plants and contracts for arms production were an ominous note in 1940."

## New Plant Construction Tendency Is To Windowless, Air Conditioned Buildings

DETROIT—Blackouts—so familiar to many sections of war-torn Europe—will never be necessary in airplane and motor plants now under construction in several parts of the country. The new buildings will be windowless, and equipped with complete air conditioning.

Huge motor plants being built by the Ford Motor Co., at the River Rouge and by Packard Motor Car Co., near Detroit, will be windowless, air-cooled buildings. The latter will require an air conditioning system of approximately 1,000 tons of refrigeration capacity.

"These estimates on the market saturation in various markets for comfort cooling should interest industry statisticians."



## FIGURES OUTLINED ON 'MARKET SATURATION' IN AIR CONDITIONING

CHICAGO—Declaring that the outlook for the air conditioning industry is more encouraging today than ever before, Willis H. Carrier, chairman of Carrier Corp. told the company's directors at a recent meeting here that the potential market "barely has been scratched."

Only 5.46% of the nation's office buildings, 0.3% of the apartment houses, and 13.9% of the hotels have been air conditioned up to now, he declared.

"At the start of this year, air conditioning had been installed in 3,010 industrial plants, but this amounted to only 1.78% of the nation's total number of factories," Mr. Carrier said. "At the same time, 40,427 installations had been made in the commercial markets—a saturation of only 2.8% in that field."

Only 1.38% of the total number of drugstores have been air conditioned; only 1.8% of the restaurants; 2.69% of the banks; and 2.21% of all other likely retail stores, Mr. Carrier asserted.

## FRIGIDAIRE PUTS UP NEW PLANT TO MAKE GUNS

U. S. Government Business Won't Interfere With Appliance Production

"With the 'Freon' refrigerants dominating the field by 1940, Kinetic Chemicals was engaged in a series of moves to classify users and set up distribution channels in accord with accepted industry practices."



## Kinetic Chemicals' Classification Of Its Customers Hailed As Forward Step

WILMINGTON, Del.—In its new set of regulations adopted this month governing the distribution of the "Freon-12" refrigerant, Kinetic Chemicals, Inc. has developed a classification of customers which some industry observers rate as the most far-reaching and significant step to be taken by a manufacturer of supplies for the refrigeration field.

Under its new distribution plan, a wholesale allowance is given to those firms in the industry who function properly as wholesalers.

"Increasing production and consumption of frozen foods, and growth in the locker plant field, brought about a demand for specially-designed low temperature units."

## McQuay Eliminates Need

For Freezer Room With Combination Zero-Pak Unit

MINNEAPOLIS—Combining in one cabinet the necessary heavy-duty low-temperature fin coil for refrigerating the locker room itself in addition to quick freezing the product load, the new McQuay model X "Zero-Pak" unit is said to eliminate any need for the separate (and costly) quick-freezing room which heretofore has been incorporated into practically all locker plants.

## 1940

"Dealers were meeting a new kind of competition in rural areas, and this editorial sounded a warning note about it."

## BOTTLED GAS COMPETITION

Rising up from nowhere to gain recognition as a real competitor for the electrical appliance industry is the bottled gas business, and the appliances designed for the use of this new utility.

During the last four years this business has grown enormously, especially in such midwestern states as Michigan, Indiana, Ohio, Illinois, Wisconsin, and Iowa. And it is well worth a rather general survey at this time, as appliance dealers begin to study their market and plan their campaigns for 1941.

Bottled gas is no flash in the pan. It is an industry which is being guided by a national organization, the Liquefied Petroleum Gas Association; and supported by the technical and financial resources of some of the major oil and gasoline producers and the manufacturers of gas appliances.

"New York City posted its first regulations for conservation of water used in refrigeration and air conditioning systems in 1940."

## N. Y. Air Cooling Jobs Must Use Water Savers

NEW YORK CITY—Under new regulations established last week by the New York City Department of Water Supply, Gas, and Electricity, all air conditioning systems in New York City which consume 5 gals. or more per minute of city water will be required to make use of some sort of water conserving device.

The regulation applies to new as well as existing installations. April 1, 1942, is the date set by the rules when "all equipment now in service . . . shall be equipped to conform with this rule."



Frigidaire organized its "Order of the Cap and Skillet" to teach executives and salesmen the fundamentals of using major appliances. Most of the men pictured are still with Frigidaire. They are, with their former and present titles: Lower row: W. I. Buchanan, then eastern sales mgr., now Pacific regional mgr.; L. A. Clark, then advertising & sales planning mgr., now asst. general sales mgr.; R. H. Huston, then western sales mgr., now eastern regional mgr.; H. T. Mattern, then central sales mgr., now central regional mgr.; P. M. Bratten, then general sales mgr. of the appliance division, now general sales mgr., all products.

Upper row: J. A. Mitzelfelt, then asst. sales mgr. eastern division, now Baltimore-Washington branch mgr.; H. M. Kelley, then manager of special markets, now appliance sales mgr.; W. F. Switzer, then manager of marketing department, now commercial & air conditioning sales mgr.; J. P. Cohane, with advertising agency; Ellsworth Gilbert, then manager of sales training, now mgr. sales promotion & training; L. C. Truesdell, manager of the major dealer department, now with Zenith Radio.

"Air conditioning of supermarkets did become a trend after the War."

## Will Air Conditioning of this Modern Super-Market Start a Trend?

Miami, Fla. Merchant Lists Four Reasons for Installation of Cooling Equipment

By J. L. Rosenmiller, York Ice Machinery Corp.

When an independent groceryman builds one of the country's largest super-markets, that's news! And when he provides every modern de-

vice for the convenience of his customers including a complete air conditioning system—that indicates a trend.

"Deepfreeze came into the field in 1940 with a catchy name and a new kind of a unit to give added impetus to the home freezer field."

## 'Deep-Freeze' Unit Designed as Home Frozen Food Safe

CHICAGO—"Deep-Freeze," a barrel-sized sub-zero temperature refrigeration unit designed for home storage and freezing of frosted foods is slated to be introduced nationally in September by the Deep-Freeze division of Motor Products Corp. here.

Powered by a two-cylinder, piston-type compressor with crankshaft of automobile construction and new type silent valve heads, the Deep-Freeze unit operates against back pressure rather than on a vacuum. This system of refrigeration, it is claimed, makes it possible to maintain the temperature inside the food chamber within 1/2° of the temperature of the refrigerant.

"A method of metering refrigerants by the so-called 'capillary tube' method had taken its place in refrigeration system design, and there was considerable technical discussion of the subject."



## CAPILLARY TUBE USE IN REFRIGERATION SYSTEM GROWS; MUCH CARE MUST BE TAKEN IN ITS APPLICATION

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

Oberc's First Branch Store Has Maximum Display

C. J. COWARD TO HEAD KELVINATOR ADVERTISING

Weber Launches U. S. Drive To Sell Roll-A-Door Cabinets

CECIL BOLING APPOINTED EASTERN AGENT FOR BUSH

York's Newest Product: A Flakce Machine

GENERAL CONTROLS TO OCCUPY NEW PLANT

Detroit 'Dura-fram' Valve Employs New Principle

Koch Gets Contract for 893 Army Refrigerators

Puffer-Hubbard Moves Plant to Grand Haven

Frigidaire Demonstration 'Televised' on Coast

Melchior, Armstrong, Dessau Moves Office To Ridgefield, N. J.

LAUER ADVANCED TO YORK PRESIDENCY

Vermilye Heads Midwest District for Ansul

UNIVERSAL COOLER WILL MOVE TO MARION, OHIO

PERLUCK COOLER GIVES CUSTOMER A 'LOOK-IN'

COPELAND HERMETIC LINE SERVICEABLE

A-P FILTER AVAILABLE IN THREE SIZES

KOCH BUYS ASSETS OF OTIS HORNE CO.



How did you look in 1940? If you attended the REMA meeting at French Lick Springs, you might find yourself here. Some of the men here have passed on, many other have changed job affiliations, but they are identified here with their 1940 job affiliations:

Bottom row: R. M. McClure, Rema; W. D. Keefe, Fedders; H. E. Chaffetz, Rema; S. G. Phillips, Dole Valve Co.; P. Golt, U. S. Chamber of Commerce; N. J. MacDonald, Thomas & Betts Co.; E. A. Vallee, Automatic Products; J. S. Forbes, Superior Valve & Fittings Co.; George Taubeneck, the News. Second row: Phil Redeker, the News; J. W. Krall, Detroit Lubricator; F. E. Jernberg, Mills Industries; A. B. Schellenberg, Alca Valve; W. C. Allen, Modern Equipment Corp.; R. M. Van Vleet, Cutler-Hammer; Robert LeBaron, Virginia Smelting; Frank Pond, Refrigeration & Industrial Supply Co. Third row: M. R. Oberholzer, Gilmer; M. H. Pendergast, Modern Equipment Corp.; J. N. Ott, Henry Valve; C. V. Gary, Henry Valve; F. J. Hood, Ansul; S. R. Robinson, Bonney Forge & Tool; F. A. M. Dawson, Refrigeration Supplies, Ltd. of Toronto; C. C. Ryan, Dole Refrigeration; K. B.

Thorndike, Detroit Lubricator.

Fourth row: John Wyllie, Jr., Temprite; Frank Smith, Tecumseh; J. A. Strachan, Kerotest; L. C. McKesson, Ansul; Clark Bridgman, Bush Mfg.; Barrett Scudder, Marsh Corp.; C. H. Benson, Imperial Brass; W. A. Leonard, Imperial Brass; Frank Gleason, Copeland; H. W. Jarrow, Jarrow Products. Fifth row: H. T. McDermott, R.S.E.S.; G. E. Graff, Ranco; A. J. Meyer, Ranco; A. B. Newton, Minneapolis-Honeywell; G. R. Whippo, Weatherhead; E. C. Eickhoff, Chase Brass; Gordon Burns, Kelvinator of Canada; David Fiske, A.S.R.E. Top row: Mel Knight, Peerless; Ivan Corcoran, Square D Co.; Otto Wilk, Weatherhead; L. F. Blough, White-Rodgers; M. E. Miller, Peerless; E. J. Zoll, Chicago-Wilcox; J. M. Dumser, Chase Brass; Fred Riggan, Jr., Mueller Brass.



## INSIDE DOPE

Flashbacks Through  
21 Years of  
AC&RN Columns

by GEORGE F. TAUBENECK

### The Shelvador Story

(Oct. 4, 1939)

Another yarn that bears retelling is that of the Crosley Shelvador. Frank West, one of the industry's leading inventors, patented this idea, (it had been suggested originally by his wife).

He peddled it to one after another of the big manufacturers. Their engineering staffs couldn't see it at all. Frank became discouraged. Finally, he began a glum round of the small producers.

Although Powell Crosley was then a leading radio manufacturer, his refrigerators were practically unknown. It takes time to build volume in this industry, and Crosley had sold only 25,000 units in his first two years.

At the end of his rope, Frank took the idea directly to Powell—who saw its possibilities instantly, and offered Frank 50 cents a box royalties, or \$35,000 cash.

Frank was almost speechless with joy. He chose the \$35,000. Powell made out the check then and there—the whole transaction requiring less than half an hour.

The Shelvador was a sensation. Crosley refrigerator sales zoomed to 50,000, to 100,000, to 150,000. Had Frank chosen the 50-cent royalty deal, he'd be eating caviar, and strawberries with cream—extra heavy.

As it was, he deposited the check in a Detroit bank, which promptly closed its doors!

### Gil Baird, Producer of Movies

(Nov. 1, 1939)

Over in Mansfield, Ohio, there is a feller we have always liked. His name is Gil Baird, and he manages sales promotion for Westinghouse. Some of Gil's friends have been pestering us recently. They say we didn't do right by our Gil in the Sept. 6 issue of the NEWS.

In that issue was a lengthy story on the making of industrial motion pictures for refrigeration manufacturers. It concentrated on those produced in Colorado Springs, and it didn't mention Baird.

Gil's friends remind us that he pioneered the use of Technicolor in business movies. That goes for anybody's movies—not just the refrigeration business.

It all started back in 1935, with the first series of six refrigeration "shorts" put out by Westinghouse. Westinghouse has provided minute movies ever since then, and has used Technicolor exclusively. Mr. Baird produces them all in Hollywood.

The writer watched Mr. Baird produce a black-and-white movie "way back in 1934, and can testify personally as to the Baird skill and technique.

### Frank & Charley

(Nov. 22, 1939)

Frank Pierce and Charley Lawson have been a team in the refrigeration industry so long that only a genuine "old timer" can remember when they weren't devising and executing sales strategy together.

Above all else they have established, over this period of time, the fact that they build solidly, with an eye to the future. They like to make a contract and keep it—"shoot straight," as Charley puts it.

When Frank and Charley looked over the distribution set-up they inherited at Kelvinator, they found they had 160 distributors on the books. That's about three or four times as many as they thought wise. The entire organization was geared to the "extensive distribution" theory (the more outlets you have, the more sales you will make) which was so prevalent a few years back, but which has been shown to be so inefficient today (see recent editorials in the NEWS).

Not only was the overhead of dealing with so extensive a distribution system excessive, but the distributors and dealers found it unfair. Too many hands were reaching into the same pot. As a result, they did less and less business on smaller and smaller margins.

Kelvinator's new plan, which is going into effect gradually, is to work with half as many distributors

(roughly, around 70) and give the stronger distributors enough territory so that they can make some real money. In spots where additional capital will be needed to do a real job, additional factory branches will be established.

At present, Kelvinator gets about 25% of its business through branches. Under the new arrangement, they expect that figure to be doubled, or maybe even go to 55%, if the branches prove to be as efficient as they hope to make them.

Strong distributors with more territory and a better deal then can be expected to go to town.

### Hair Today, Gone Tomorrow

(Dec. 20, 1939)

This department can remember when Gil Baird and Bob Richards, the employee-relations man who recently staged a big-league musical comedy using only Mansfield employees, looked like boy executives. Now they both have hair which has turned to silver.

So has V. E. "Sam" Vining, who would come close to winning a Gallup poll to nominate the Industry's No. 1 Personality. "Sam," incidentally, has bought a farm. We don't know just what he'll do out there, but whatever it is, we'll bet those hogs and chickens and trees and stands of corn will know that they've had an Experience.

### Commercial Pioneer

(Nov. 27, 1940)

When Jerry Tyler first got his revolutionary welded steel cases rolling off a production line, he began advertising them in the NEWS, using large space. Some of his competitors became so angry that they threatened to cancel their contracts if we accepted any more of his advertisements.

But we visited his plant, checked tests on his product, and saw that he knew what he was doing. Time has proved that he was right; and Jerry Tyler, instead of being an object of (1) ridicule and (2) commercial hatred, is now president of the Commercial Refrigerator Manufacturers Association.

Often you hear it said that he is a "young man with his feet on the ground." Yet flying is his hobby. He flies his own plane, and flies it well. He flies it on business trips, and for pleasure, too, and can alight almost in his own backyard.

Not long ago we were discussing a matter over the long distance phone when he said: "Say, let's really get down to cases on this thing. I'll be in Detroit before you've finished reading your mail."

The mail was quite heavy that day, and Jerry almost made it.

### When Sidney Was a Ghost

(Nov. 27, 1940)

There's one group of executives who have moved around the industry quite a bit—and nearly always as a unit. And, for some time now, they've headed up their own company. Today these men—Harry Thompson, Frank Gleason, W. G. von Meyer, Otto Buschmann, and G. L. Curtis of Copeland—are operating one of the most successful manufacturing operations in the country.

They have three plants going full blast over in Sidney, Ohio, turning out commercial refrigerating machines, household refrigerators, and refrigeration equipment for the Navy. And they're making money. They have so many personal friends of long standing in the industry that not even their keenest competitors begrudge them the success they so richly deserve.

The writer can recall one bitterly cold night in December, 1937, when he arrived at the little town of Sidney after a tough drive through a swirling, blinding, Ohio snowstorm. Frank Gleason had phoned that he and his partners were about to close a deal with Dallas Winslow for the purchase of the Copeland Refrigerator Co., and thought I'd like to be there to get the story first-hand.

At that time Copeland had little else but a good name. They had moved operations from Detroit to the little ghost town of Sidney which, at that time, wasn't even walking in

its sleep—it was just sleeping.

But the boys found plenty of skilled mechanics hibernating on the surrounding farms, and they kept their overhead low. They knew refrigeration, they knew manufacturing, and they knew selling. Slowly they infused some warmth in Sidney. You should see it now.

### Guy Henry and Charlie Gary

(Jan. 8, 1941)

When Guy Henry, president of Henry Valve Co., gets interested in something, he really concentrates. A hard working but genial executive, he can "lose himself" in the matter of a moment, with the result that he gets things done—and does them well.

He applies those same powers of concentration to his outside interests—sometimes with an unusual result, like the case recently in which his obliviousness to all but the matter at hand found him forced to turn hitchhiker.

In building a new home at Arlington Heights, a suburb northwest of Chicago, Guy became so interested and enthusiastic that he didn't even notice the change in the seasons, with the result that he failed to put any anti-freeze in the radiator of his car. Came a cold spell—and he had to thumb his way into Arlington Heights to catch a train into the city.

Incidentally, he has installed a billiard table in his recreation room. Intimates grin grimly, and issue a warning that if you're going to play billiards or pool with him, leave your spare change in your pocket. He has been a wizard with a cue since his youth.

Charlie Gary likes to work late, and often 2 a.m. may be his checking-out time. About the only sure methods that have been found for getting him on his way home is to have the heat turned off, or to have a fuse blow out. (That 2 a.m. training, Charlie, will put you in good stead if you ever want to get into the publishing business.)

In his younger days Charlie was a sailor, and can tell you some things about the ports of the world. Later he labored abroad in the tobacco business. Today he still gets his fill of travel, ranging all over the country in the interest of the Henry Valve Co. Perhaps that's why he puts in so much night toil—trying to catch up with his homework.

Charlie is good company—friendly, generous, and with a knack for an original way of saying things.

A couple of years ago Charlie was in a plane crackup out west, near Salt Lake City, we believe. Although bruised and battered up a bit he took the next plane for his destination. His reaction to the affair, when questioned about it later, was characteristic:

"For a moment," said Charlie in describing the accident, "things looked pretty grim."

### Graff and Raney

(Jan. 8, 1941)

Two Ranco top executives—E. C. Raney, vice president and general manager, and Ed Graff, sales manager—are photography enthusiasts. They are also charter members of the Columbus (Ohio) Downtown Quarterback's Club, where they unite with other grandstand coaches and decide what play Ohio State should have used last Saturday when it was

third down, two to go, the ball resting on the opponents' 15-yard stripe.

Come to think of it, photography and football are two pretty good hobbies. Next to reading AIR CONDITIONING & REFRIGERATION NEWS and getting fat on home cookin', there are no other pleasures we can recommend so highly.

As for photography, Mr. Raney goes in for color work, both still and motion. Mr. Graff, on the other hand, is never so delighted as when he can get a candid snapshot of some associate paring his toenails or snoring on his desk.

He balances this type of fun with a serious interest in music.

### Postwar Pipedreams

(May 24, 1943)

Lee Clark, Frigidaire's personable advertising and sales promotion manager, was in town the other day. He expressed considerable concern over all the publicity involving fabulous, fairy-land, postwar refrigeration products.

If the people are conditioned to expect something extra-terrestrial after the war, he reasons, will they be satisfied with the more-conservative-than-they-expect models which actually will appear?

Another side to this line of speculation is that even if it were possible to turn out a line of pipe-dream models, customers might not want them. Experience teaches us that the buying public is conservative. For many years the magazines have been full of streamlined pictures and drawings of modernistic homes; yet most people went right on building Colonial, Georgian, French Provin-

(Continued on next page)

for extra motor life

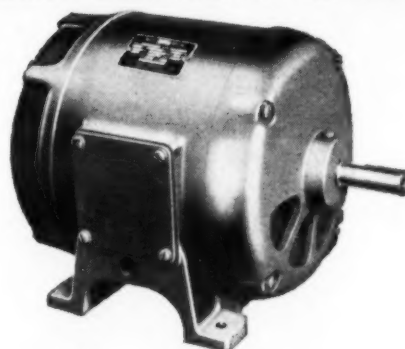
for Air Conditioning and Refrigeration

# DEPEND ON DELCO

It's the *plus service* in motors that determines *plus value*. Like, for instance, the *extra life* built into Delco motors . . . and the backing Delco motors get from a nationwide service organization maintaining large stocks of replacement units and parts in the field.



Delco Single-Phase, Repulsion-Start-Induction Fractional Motor, 1/2 through 3/4 h.p. Also in these sizes with Condenser Start.



Delco Single-Phase, Repulsion-Start-Induction Integral Motor, 1 through 5 h.p. Polyphase Integral, 1 through 100 h.p.

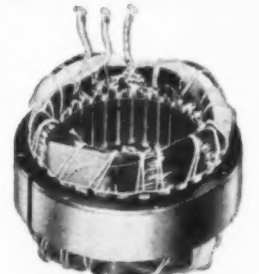


Delco Single-Phase Fractional Motor with Capacitor, 1/8 through 1/3 h.p. For blowers and open type compressors.

## DELCO MOTORS



DELCO PRODUCTS  
Division of General Motors Corporation,  
Dayton, Ohio



Delco Hermetic Motors, 1/16 h.p. and up; Split-Phase, Condenser Start, and Condenser-Start-Condenser Run; precision made, long lasting.

SALES OFFICES: CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • HARTFORD • PHILADELPHIA • ST. LOUIS



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Continued from preceding page)  
cial, and Early American Railway Depot types of homes.

Following Lee Clark's visit there came a letter from Jim Newcomb of Westinghouse, who also has some thoughts on the subject of postwar models.

"Our postwar planning in the interests of consumers and dealers covers two stages," Mr. Newcomb reported. "First, when the war is over we plan to get into production fast on essentially those products you sold just before the war. We shall improve them but won't experiment with radical changes.

"We believe dealers will want a line of products which you can get for actual selling—fast," the letter continued. "It's all right to talk about new plastic and glass refrigerators, but if you have to wait for months before you can get such products, you're not going to play many tunes on your cash register meanwhile.

"We have been in this business a long time, and we know that nobody can introduce new and revolutionary things without 'bugs.' And 'bugs' mean delays in getting onto the market, service expense to dealers, disappointment to customers."

Not long ago in a Washington hotel room we heard Jim Nance (Hotpoint) expound on the same subject most heatedly.

All dealers please note.

## Flashbacks Through 21 Years of AC&RN Columns

### Atom Bomb Prediction

(Nov. 8, 1943)

One group of learned men who are not over-optimistic about winning the war are the scientists associated with Mr. Kettering and his all-star cast of inventors and invention-examiners.

These high-domed wizards are seriously concerned—privately—over evidence of German scientific progress. They feel that the Germans are ahead of us on the development of atomic power. If they can incorporate atomic power into weapons—and get them in production—we might be in for the surprise of our lives.

(Editor's Note: This "Inside Dope" item appeared 20 months before the first atom bomb was dropped, and long before any mention of atomic weapons appeared in print.)

### Soldier's Nightmare

(March 14, 1944)

Charley Lawson, Phil Bratten, George Jones, Jim Nance, Jim Newcomb, and other realistic executives—all of whom have been trying to disillusion gullible folks who expect postwar products to be pipedream models with built-in rockets, radar, and an attachment for printing five-dollar bills—will be pleased by this item.

"Yank," the Army's private newspaper, recently published a lyric poem written by a sergeant in the Mediterranean theater. Title of this lyric has the perfect rhythm and swing of one of those deathless song titles. It is "Please Don't Streamline Mother While I'm Gone."

In an American cantonment the mess hall recently was decorated with posters emblazoned with the slogan: "Food Will Win the War."

Underneath one of these slogans some G. I. Joe had crayoned: "Yes, but how can we get the enemy to eat here?"

### Did Paper Win the War?

(May 22, 1944)

Last week, whilst worrying our heads off over this tight paper situation, in came an order from the District of Columbia for one of our dollar manuals.

This purchase order consisted of 105 pages (all extra length pages). It weighed 7½ oz. The manual ordered weighs just 7 oz. Included in the order was a questionnaire over which our girls struggled for hours before bringing it upstairs, which is how the whole thing finally came to our attention.

The District of Columbia will get none of our manuals; but they did get a searing letter which should ignite a raging fire down there.

Last Friday this story was told before the Air Conditioning Council of Indianapolis. Afterward, a couple of engineers from Allison came up with wide grins and said:

"Brother, you haven't seen anything. The paper work goes out of our plants in trucks!"

### Invasion On the Nose

(June 19, 1944)

Invasion news makes every other type of news seem insignificant currently. And while we're on that subject, many subscribers noted that the editorial in the June 5 AIR CONDITIONING & REFRIGERATION NEWS started out:

"Smashing events are about to erupt. We are on the verge of historic explosions. Our entire situation can change almost before we know it."

Next day June 6, came the Invasion of France.

### For Free

(July 16, 1945)

We had a dandy phone call the other day. Just dandy.

It was long distance from New York, and the voice on the other end of the line started out something like this:

"You don't know me, but I've heard about you. They tell me you know what's going on in the refrigeration business. Well, we have a big plant here, and we can make cabinets for these home freezers. Gimme some names and addresses of manufacturers to contact."

So, obligingly, we selected a few concerns which might be interested, and passed on some pretty valuable information he might have had a tough time obtaining otherwise.

"That's fine," he responded. "Now, tell you what I want you to do. Every month I want you to write me a letter, supplying me with new names of prospects."

"Here's a better suggestion," we returned. "Subscribe to AIR CONDITIONING & REFRIGERATION NEWS and you'll get all that information weekly, plus a lot of other things you'll want to know."

There was a pause. Finally: "We-e-ell, send me a free copy, and we'll see if there's anything in it for us!"

The information he had already received over the phone could turn out to be worth thousands of dollars to him, yet he was unwilling to spend five bucks for a subscription to the NEWS. And he wanted us to supply him with a free monthly informational service!

This brassy little incident serves to point up one of the sometimes-unseen and often too-little-appreciated services of a good industry paper. Perhaps a third of the editors' time is spent digging up information requested by subscribers and customers.

Some inquiries require days, and even weeks, of research. And every day's mail is loaded with them. This is part of our job, and we're glad to do it for customers—even if it does make us wish there were 36 hours in the day.

But free work for non-subscribers? Huh-uh. We're in business here.

### More 'For Free'

(July 30, 1945)

It's funny, the reactions you get to things sometimes.

Last issue in this space was related the tale about the long-distance phoner from New York who wanted a lot of free information but wouldn't even subscribe to the NEWS to get it.

Instead of slowing down the requests for research assistance, our "please give me the answers" mail practically doubled. And nearly every such letter opened with an almost identical statement: "I got a big kick out of your story about the fellow who wanted all the free information. However, as a subscriber, I feel free to ask your help on a problem."

We are really and truly glad to get all these inquiries because they constitute sound evidence of "live" readership. Moreover, many of these questions lead to useful and interesting editorial ideas.

The letter we enjoyed and appreciated the most, however, came from E. G. Sanders, a commercial refrigeration dealer in Dayton, Ohio. Quote:

"After reading in your column the 'For Free' item it struck us so amusing that the writer was pleased to find that he was not the only one that meets the kind of people you had on the phone who want everything but wouldn't spend a nickel to see the Statue of Liberty . . . across the ocean.

"So, somewhat to appease this situation we were pleased to phone your office and enter our order for six subscriptions for our Dayton

store and six for our Columbus store, so that our top men can have your paper for their specific personal use. I am tired of having everybody taking it off my desk."

That last remark substantiates an observation which many, many men in the industry have made—that there's a lot of mileage in every copy of the NEWS, because it's passed around so much.

### Baron Luigi Parilli

(Oct. 22, 1945)

In two recent issues of *The Saturday Evening Post*—which, for our money, has reached an all-time peak of interest recently—Forrest Davis reports on the "Secret History of a Surrender."

It has to do with the fascinating behind-the-scenes diplomacy which led to the capitulation of the Axis armies in Italy.

One mysterious and invaluable go-between figure in those cloak-and-dagger dickerings was one Baron Luigi Parilli, a man identified as having sold American cars in Europe.

Baron Parilli did more than that. He was Kelvinator's commercial representative in France and Belgium for many, many years.

Shortly before the war the writer was entertained in Baron Parilli's fantastic apartment in Paris (boys, you've never seen anything like it in Chicago, Milwaukee, or St. Paul!).

He is one of the most amazing characters we've ever met, and it's easy to imagine how effective he must have been on his delicate, ticklish, sealed-beam operations.

### Story of the Week

(June 3, 1946)

Paul G. Hoffman, president of the Studebaker Corp., opened his talk before the eleventh annual Distribution Congress of the National Federation of Sales Executives in Chicago by telling a tale.

This story had to do with one of those post-wedding cavalcades of streamered, honking automobiles which seem so hilariously fashionable among certain elements of the population these days.

Mr. Hoffman was in a hurry, so he passed up the string of cars in the cavalcade as fast as he could. Finally he caught up with the lead car in the procession, the one containing the bride-and-groom themselves. Posted on the back of this bridal auto was one of those wartime posters which read:

"Careless talk caused this."

That "congress" of sales executives was one of the most remarkable conventions the writer has been privileged to attend. It was notable as to (1) the high calibre of the executives who attended, (2) the high reputation of the speakers, and (3) the high speed and click-click promptness with which the program machine-gunned ahead according to schedule.

George Jones, Servel's well-liked vice president in charge of sales, was in charge of the whole she-bang. For the last year George has been president of the National Federation of Sales Executives. And a lot of people there told us that the affable, erudite Mr. Jones practically resuscitated the NFSE from wartime moribundity during his term of office.

Men like Howard Clary of Norge, Gus Jaeger of Hotpoint, Jim Tranter and Ed Thiele of Kold-Hold paid sincere tributes to Jones and his handling of the congress and the federation.

Speaker who impressed us most was Brig. General Albert J. Browning, whom young Henry Ford II has recently made a vice president of the Ford Motor Co.

Mr. Browning, who is a dead ringer for Frank Smith of Tecumseh Products, declared that "government regulation is like telling a lie—for every rule you frame, you must make 10 more to cover up the first. Planned economy? All that magic phrase adds up to is 'planned undermining of democracy.'"

And he summed up the nation's present economic dead-end with this simple, obvious statement:

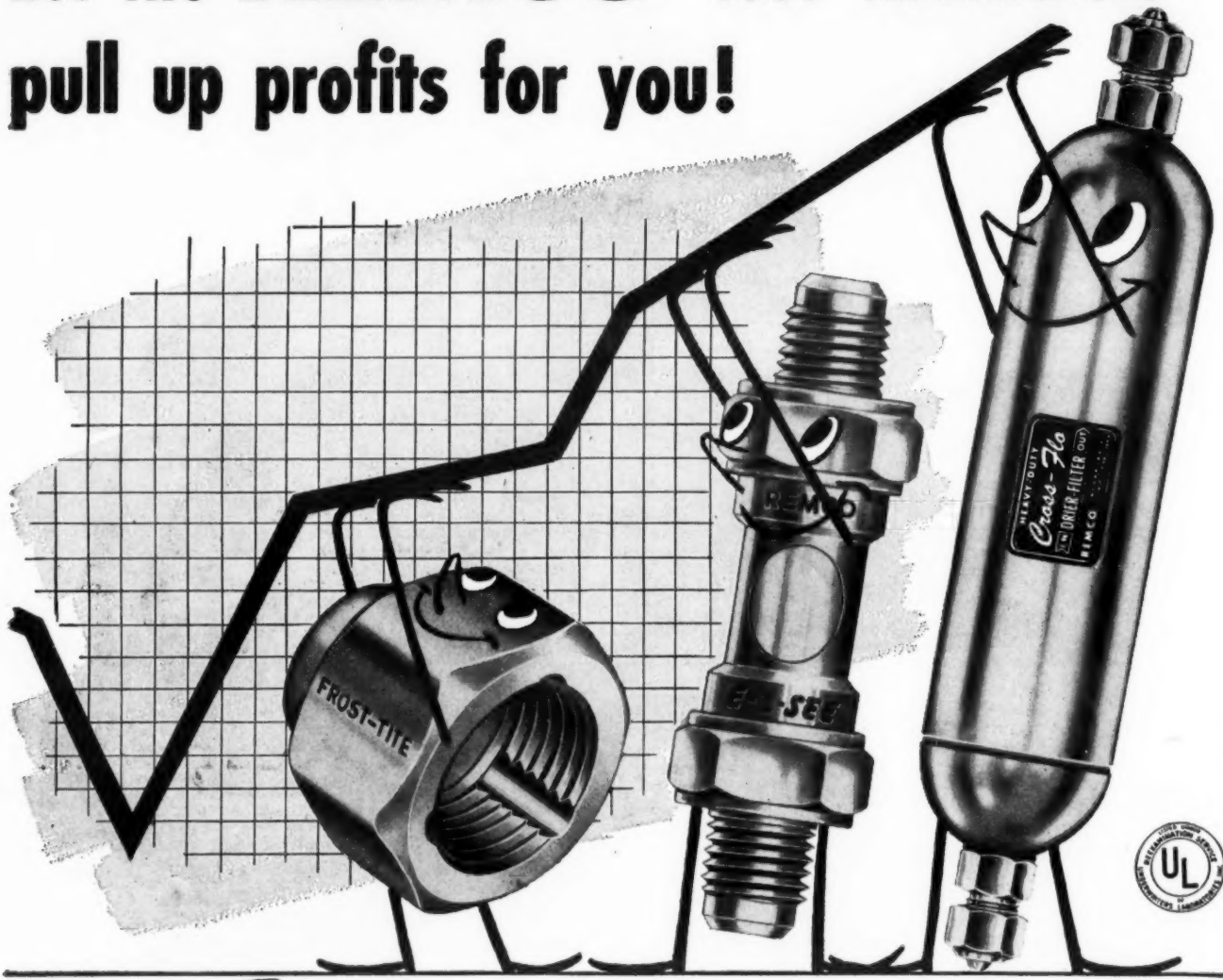
"The umpire should stay out of the game."

Can you beat that sentence as an answer to what's wrong with America, and the world today?

His ringing conclusion: "All of us should devote 10% of our time, 10% of our men's time, and 10% of our budgets to selling—not our products or our trade-marks—but the American system which

(Concluded on next page)

# Let the REMCO "loss eliminators" pull up profits for you!



## Cross-Flo eliminates losses from clogged driers and expansion valve freeze-ups—

Now improved with new super-strength REMCAL Molded Drying Element and new Fiberglass Depth Filter. Withstands the severest shock and vibration; powdering and dusting absolutely eliminated; efficient at liquid line temps. up to 150° F. and dew point as low as 60° F.

## E-Z-SEE eliminates losses from leaking liquid indicators—

With E-Z-See, you are assured of the following definite advantages: (1) E-Z to see thru—both sides of the body are open to let in light (2) Positively leakproof—can't leak because springs automatically maintain just the right force to form a positive seal around the glass (3) Perfectly Safe—glass is protected for safety at pressures up to 500 psi. Sizes ¼" thru 1½".

## FROST-TITE eliminates losses from loosened and cracked flare nuts—

In Frost-Tite flare nuts, forged frost-relief slots provide relief for expanding ice within the nut, and thus no force is created to cause loosening, splitting, or cracking. Cost no more than ordinary flare nuts—are ideal for use anywhere in the system. Now also made as "Swivel Connectors."

— Send for Literature and Prices —

CARRIED IN STOCK BY LEADING WHOLESALEERS EVERYWHERE

West Coast warehouse stock at: 2103 So. San Pedro, Los Angeles, Calif.  
EXPORT DEPARTMENT: Melchior, Armstrong, Dessau—Ridgefield, N. J.

**REMCO**  
INCORPORATED  
ZELLENOPLE, PENNSYLVANIA



## INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from preceding page)

has made our superlative way of life possible."

Well, AIR CONDITIONING & REFRIGERATION NEWS has operated on this formula for several years. We're sold on the need—how about you?

### Birth of the News

(Sept. 30, 1946)

September, 1926, when REFRIGERATION NEWS first appeared, was a happy, hoppy, hectic, hopeful Time of Our Lives.

People were singing: "When the Red, Red Robin Comes Bob, Bob, Bobbin' Along," "Where'd You Get Those Eyes," "Gimme a Little Kiss, Will Ya, Huh?", and "Bye Bye Blackbird."

The country had been taken over by "flaming youth." Avid book-lovers were reading F. Scott Fitzgerald and Percy Marks (the scandalously realistic novelists of that Age). Bathing suits and evening gowns were getting skimpier. The Old Folk were cluck-clucking. (Yet, the ratio of marriages to divorces was 7 to 1 then. Today it's 3 to 1!)

Optimism was in the air. Economists and university professors were talking learnedly about "ever-rising spirals of prosperity." Politicians assured one and all that there'd be a "chicken in every pot," and two cars in the garage, for the average American family.

It was a time of Big Schemes and Grandiose Ideas, of unlimited hopes and roseate dreams. The world was our oyster, then.

Looking back upon those effervescent days, we harassed folk of the 1940's quickly agree that it must have been a joy to be in business during those ebullient times, and that surely it must have been great to be alive then.

Dreams were coming true.

The flippant tenor of those times, however, failed to ring in the ears of an intensely serious young man by the name of F. M. Cockrell. He was a fellow who was so intent upon putting his own case-hardened ideas into effect that he probably never did note that most of his contemporaries were humming "Baby Face," and "What Shall I Say After I Say I'm Sorry?"

Some of his associates were then beginning to make money in the stock market. Most of his acquaintances were playing golf, and practically everybody he knew had gone crazy over a new card game called "contract bridge" (which quickly shoved aside the old "auction" version).

But none of these fads made the slightest impression on him. At that time he was totally fascinated by a new home appliance, the electric refrigerator.

F. M. Cockrell had learned a lot about industrial publishing during his years of service with McGraw-Hill. And he sensed an opportunity for a new publication when he envisioned the possibilities of electric refrigeration as a coming industry.

On a shoestring he launched ELECTRIC REFRIGERATION NEWS. Like most new enterprises, it wasn't an immediate success. Long hours and quarts of red ink went into the maturing of the NEWS.

Nevertheless, his ideas prevailed, and here we are today—feeling proud and happy about our two decades of service to a great industry.

This is our twentieth anniversary. So what? Does that anniversary cut any ice? Well, yes! The NEWS has grown up with the industry, and so have its editors. Many a thoughtful contemporary has said that their accumulated backlog of experience is invaluable to the industry today. Thus the editors who have "grown up with the industry" can take pride in an anniversary celebration of a lengthy devotion to a particular job.

Cockrell liked to work with young men.

"I want associates who are impressionable," he used to say, "and eager."

That tradition of the "young, vigorous staff" persists here at the NEWS today, many years after his death.

Yet, some of us young old-timers still remember with dreamy nostalgia those wonderful days when the NEWS was struggling. We had a grand time then—and for many years thereafter—even though we were often poor and sometimes discouraged.

## Flashbacks Through 21 Years of AC&RN Columns

### White House Visit (May 10, 1948)

Meeting President Harry S. Truman for the first time is a pleasant surprise . . . almost a shock. He's more impressive than I'd expected him to be. First off, he's so healthy in appearance. The contrast with Roosevelt, whom "Dope" met many times in Washington from 1933 on, is startling.

When you saw him in his office, Roosevelt was a bit unkempt and untidy. Truman is without doubt one of the most faultlessly tailored, and handsomely groomed Men of Distinction you'll ever see. (What a picture he'd make for the Lord Calvert advertisements.)

With Roosevelt, you were always conscious of his affliction. You walked around behind his desk to shake hands with him while he remained seated. Harry Truman comes around in front of his desk to shake

hands. His carriage is erect, his movements vigorous and emphatic, and he looks just as if he had stepped from a barber's chair, following 10 hours of sleep the night before—and a long vacation in a sunny climate.

The U. S. Presidency is supposed to be a man-killing job. Harry Truman appears to be thriving in it, and enjoying every minute of it. From what he said, and from the way he looked, we doubt very much that he will step aside for another candidate. He's "fit as a fiddle and raring to go," and entirely confident that he'll be the Democrat's nominee and the next President.

There's one thing that Truman has in common with FDR in an intimate interview or press conference: Like Roosevelt, Truman oversimplifies. He makes big issues seem like ABC's. With Truman, a controversy is an open-or-shut case. Like Roosevelt, his side is white, the other black.

### The Freezer Controversy

(Aug. 30, 1948)

Because the Editor of AIR CONDITIONING & REFRIGERATION NEWS honestly believes that the potential market for home and farm freezers is

"out of this world," during the past year News editorials have gone all-out to persuade distributors and dealers that they ought to get in on the ground floor of this lusty infant industry.

However, when the Editor temporarily ran out of ammunition for this heart-and-soul editorial crusade, he called upon other freezer enthusiasts to contribute "guest editorials" on this subject. And they have responded heartily.

Every one of these front-page "freezer editorials," without exception, has been reprinted and redistributed—often in staggeringly huge quantities—by dealers and distributors throughout the nation.

Consequently—thanks in part to this editorial crusade on the part of the NEWS—a new home appliance—which seemed to be dying in the incubator during the summer of 1947—now is well on the road to major stature. Most directors and promoters of home-and-farm freezer sales give considerable credit to the NEWS for reviving this incubator baby.

Every so, there remain plenty of die-hard critics—both of our pioneer-

ing editorial crusade, and of the freezer itself.

Time will tell who is right. As for us, well, our neck is stuck way out for the freezer. Likewise, for air conditioning!

### Stories of the Week

(Dec. 26, 1949)

Many people call the office of Federal Labor Conciliator Cyrus Ching in Washington, D. C. to inquire whether or not he's Chinese.

His secretary has a standing order to answer:

"No, he's not Chinese. He's three parts Scotch and one part soda."

A stunning redhead appeared at a party in one of those low-and-behold gowns which are the current rage. Fellow who danced with her seemed quite distracted by the plunging neckline. Any moment, he worried, it might slip off her shoulders.

"Er, that's a daring dress you're wearing," he stammered. "Doesn't it bother you a bit?"

"Not at all," retorted the redhead. "Does it bother you?"

## THE "CONTRADICTION" THAT CHANGED THE COURSE OF COMMERCIAL AND INDUSTRIAL REFRIGERATION



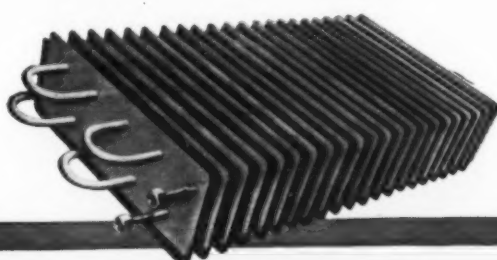
In this attic room, 25 years ago, was born a new idea and principle in refrigeration—a cross-fin coil that was to lick the problem of defrosting, which was then holding back a struggling electric refrigeration industry.

Larkin—and Larkin alone—foresaw the need for

a refrigeration coil of this kind. And as a result, it was made and patented, and its fame grew.

*From India to Indiana*—Today Larkin coils are known and used throughout the world . . . from South America to Asia, from India to Indiana.

Through the years Larkin has held fast to the principle of building quality products from quality materials to serve the refrigeration industry.



# LARKIN COILS INC.

519 Memorial Drive, S. E., Atlanta, Georgia

MANUFACTURERS OF CROSS-FIN COILS AND COMMERCIAL AND INDUSTRIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

PRESENT HOME OF LARKIN COILS, INC.







Frigidaire was awarded a contract to make this machine gun early in 1941. Pictured left to right (titles in parentheses indicate positions at the time the picture was taken) are: C. W. McMullen (manager, Standards Div.), manager, Inspection Div.; Army Ordnance officer; C. A. Copp (manager, War Contracts Div.), manager, Industrial Relations; E. R. Godfrey (assistant general manager) vice president, General Motors; M. M. Roberts (manager of plants), general manager; Army Ordnance officer; S. M. Schweller, chief engineer.

"This gives a pretty good idea of how far the commercial refrigeration and air conditioning industries had progressed in a relatively short time."

### The Widening Use Of Refrigeration

NEW YORK CITY—An increasing number of unusual applications for commercial refrigeration systems keeps turning up day after day. At the recent convention of the Servel electric refrigeration and air conditioning division, W. J. Aulsebrook, assistant sales manager, enumerated some of the more unusual jobs listed in their files as follows:

- Oil coolers at -60°.
- Instrument testers -30° up.



Cooling airplane rivets at about 32°.

Growing wheat in Department of Agriculture.

Incubating bacteria to fight saw flies in spruce timber.

Cooling oil in machine shops for precision production on grinding operations.

Storing serums and cultures worth hundreds of thousands of dollars in South America.

Used by National Geographical Society on their eclipse trip to remote Pacific islands to cool darkroom for developing films.

Air conditioning of automobiles and ambulances.

Freezing of champagne necks to remove dregs.

Cooling the chocolate coating on doughnuts.

Cooling brine for testing thermostats in one of the largest control factories in America.

Cooling the paraffin liners in bottle caps.

Cooling water used in the testing of cement briquettes in a state highway laboratory.

"The industry and the NEWS found no little satisfaction in the success of the third All-Industry Show which served as a measure of growth of commercial refrigeration and air conditioning."

## It's Now An Institution

No longer is there any question about the place of the All-Industry Exhibition in the air conditioning and refrigeration industry. It was a success the first year, a bigger success the second year, and a still bigger success the third.

That word "success" can be measured in terms of number of registrants, in terms of dollar volume or unit volume of sales, and it can be measured in terms of increasingly better relations between competitors and between makers and suppliers.

From any angle you look at it, the Third Annual Refrigeration and Air Conditioning Exhibition, which just closed in Chicago, lived up to the expectations of all who spent good money to show there, or to come there to see the show.



"Considerable excitement was aroused when crime touched the industry. Note, however, the word 'apparently' in the NEWS story, for it was later learned that the 'victim' had taken it on the lam."

### Thugs Kidnap Victor Diessler from Office

GREENSVILLE, Pa.—Victor G. Deissler, head of the Deissler Machine Co., manufacturer of commercial refrigeration machines, who was apparently beaten, robbed, and kidnapped from the company's offices Sunday night was still missing tonight (Monday).

"Rising costs of production and general inflationary trends of the rearmament program are felt by case manufacturers."

### Prices Go Up on Display Cases

DETROIT—Price increases by manufacturers of commercial refrigerator equipment (display cases, reach-in, and walk-in coolers, etc.) will be general throughout the industry, a survey among the leading makers revealed today. Most of the increases were at the 5% mark, although some were as much as 10%.



"Already 'hoarding' of drums was beginning to cause headaches for producers, distributors, and users of refrigerants."

## 2 Plans May Minimize Threatened Shortage of Refrigerant Cylinders

Virginia Smelting Calls Drums 'Homesick' In Series of Customer Mailing Pieces

"This editorial of 10 years ago has a discouragingly familiar ring."

## America Needs More Steel Capacity

Air conditioning and refrigeration manufacturers today are finding it more and more difficult to get supplies of raw materials because several months ago their suppliers won an argument.

The question was: Will there be enough steel, aluminum, copper, etc. to supply America's rearmament needs plus non-defense requirements? Suppliers went out on a limb and answered: Yes.

Today's events are proving them wrong, tragically wrong.

It is also true, however, that the steel makers in particular have been hogishly refusing to expand their production facilities because they don't want to be left with burdensome excess capacity at the end of the war.



"This was the third in the series and the last to be held before fighting and producing under a war economy engaged the industry to 100% of its capacity."

## Refrigeration's Big Show of the Year Opens Monday as Manufacturers Jam 200 Exhibit Spaces at All-Industry Exhibition

"Consistently through the years the NEWS has tried to give the industry advance warnings of things ahead in the near or distant future. Sometimes editorial optimism provided a much-needed shot in the arm. Some gloomy predictions, however, proved all too true."

## What's Going to Happen to Appliance Dealers?

Editor Foresees Reduction in Number of Dealers as Result of Armament Program . . . Other Things To Expect . . . How To Keep Your Franchise If Things Get Tough

WASHINGTON, D. C.—Chief difference between preparing for this war and preparing for the last one is that today's war is hungrier. It devours greatly greater quantities of metals than most of us are able to imagine.

Airplanes are getting bigger and bigger. So are tanks. So are guns. And the guns spew out bullets at incredible speed now. That's why supply lines and supply bases are so terribly important now. Keeping an army supplied with expendable munitions is now a far greater task than getting the army there in the first place.

How is all this going to affect the appliance dealer? Well, most dealers already expect the worst. They know that automobile production for 1942 has been cut by decree—20% is the original figure, 50% a possibility.

"Citizens have to travel on their stomachs, too, it was literally brought home to England by Nazi raiders and rockets. The British were quick to realize the importance of refrigeration as they fought for their very lives."

## PRESERVATION OF FOOD SUPPLY IS KEY TO BRITAIN'S EXISTENCE

Government Sponsors Building of Gas-Proof Low-Temperature Food Storage Plants

PITTSBURGH—"Great Britain's defense, up to now, has been possible largely because it preserved and retained foods," A. E. Stevens, vice president of Birds Eye Frosted Foods Sales Corp. today reported to the second annual convention of the Institute of Food Technologists.

"New ideas are bound to incur opposition at first, but if sound in themselves they gradually gain more acceptance. No longer is this one considered a 'threat' but rather a plan that quite a number of firms throughout the country have adopted successfully."

## Dallas Service Engineers See Maintenance Contracts as Threat to Their Welfare

DALLAS—That the so-called "guaranteed" refrigeration maintenance contract is foredoomed by its very nature to fail, but a potent threat to the welfare of the industry as a whole was the general view brought out at a meeting here of members of the refrigeration service engineers organization.

The contract complained against is an innovation in Dallas, which thrust itself into the forefront several months ago. It binds the service man not only to inspect and service equipment, but to replace whatever parts may be required.

"There was only one error in this story published Feb. 12, 1941. That figure 'six' should have been 10."

## SUBCONTRACTORS IN LIMELIGHT AT 'DEFENSE' GHQ

Small Manufacturers Sought As Nation Prepares for 'Shooting War'

WASHINGTON, D. C.—This nation may stay out of war, but the people who are running our government today aren't taking any chances. Every decision made in Washington today is predicated on the assumption that we may be in a "shooting war" within six months. All plans are being made toward that end.

"A good sign of developing maturity in an industry is the exchange of closely guarded financial data between its members."

## Jobbers Adopt Plan To Study Business Costs

CHICAGO—An aggressive program of projects to benefit materially its membership was outlined by the National Refrigeration Supply Jobbers Association at its annual convention.

Most important of the projects will be a very thorough "cost analysis"—a survey of the average cost of doing business by the various classes of jobbers. Results of this survey will be available only to co-operating members.

"Increasing use of refrigeration by all branches of the Armed Forces necessitated an intensified educational program to which the industry gave its wholehearted support."

## YORK ESTABLISHES SCHOOL FOR NAVY

YORK, Pa.—The first of three groups of key service men from the Atlantic and Pacific fleets of the U. S. Navy last week began a six-week course of instruction in the operation and maintenance of air conditioning and refrigerating equipment at the plant of York Ice Machinery Corp.



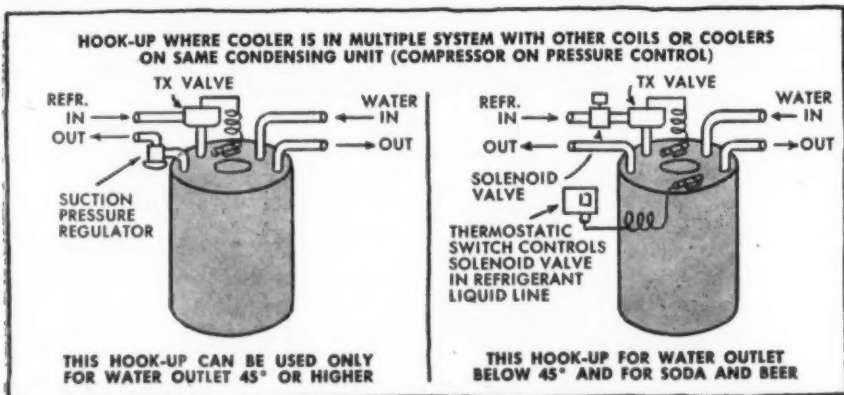
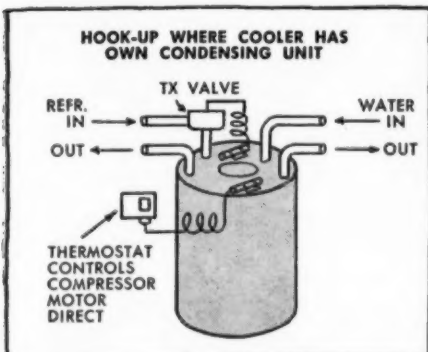
"Mechanical refrigeration made it possible for the nation to speed its production of military planes while simultaneously minimizing the possibility of discovery and attack from the air. Lessons learned then may prove of inestimable value in the future."

## Air Conditioning by the Acre

Here's the First Story of World's Largest Plant Air Conditioning System, a 6,000-Ton Job for a 'Blacked Out' Aviation Plant

## EASY DOES IT. WITH heat-x LIQUID COOLERS

Simplified construction makes Heat-X Liquid Coolers easy to install and easy to service. Separate liquid and refrigerant coils are cast within single aluminum block . . . positive insurance against freeze-up damage. No oil separator or surge drum necessary. Single and multiple hookups illustrated below.

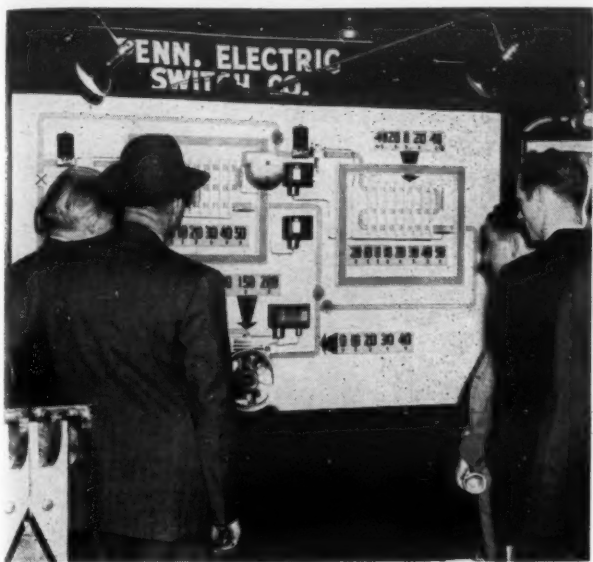


WRITE DEPT. ED FOR SPECIFICATION SHEETS

THE HEAT-X-CHANGER CO., INC.  
BREWSTER, NEW YORK







To explain more fully to engineers the operation and use of controls and switches, Penn Electric Switch Co. in 1941 began using an electrically lighted panel board for demonstration. The lighted diagrams were part of Penn's road shows, started at that time.



"To focus the attention of the government on the essential role that commercial refrigeration played in all phases of American life, including its use in vital industrial processes along with the preservation of foods and medicines and thus the health of the citizenry the NEWS prepared a complete analysis of commercial applications.

## How Commercial Refrigeration Protects the Health and Welfare Of America—a Complete Survey of a Vital and Essential Industry

"For the first time the government, by edict, moves in to regulate installment sales."

### FDR PUTS CONTROLS ON TIME SELLING

"The question propounded by the NEWS 10 years ago may be of renewed interest today."

### THE PLASTIC AGE IS COMING!

Plastics—the man-made substances which are so far superior in so many respects to the substances found in nature—are still in the miniature stage of usefulness. All we have dared to do so far is make small objects of plastics; ash trays, knobs, buttons, toothbrush handles, belts and suspenders, baubles, pans, and playthings.

Refrigerator manufacturers are toying with plastics—gingerly, to be sure, but nevertheless they are showing a certain frightened interest. They are using plastic nameplates, plastic breaker strips, and few have even gone so far as to introduce plastic door-liners.

Question: MUST REFRIGERATORS BE MADE OUT OF STEEL?

"There was a growing movement in the commercial and air conditioning field for contractors and independent service organizations to form associations to give them a greater voice in affairs of industry and more particularly to deal with problems created by local codes and conditions."

### CONTRACTORS FORM NEW ASSOCIATION IN DETROIT AREA

DETROIT—The Refrigeration Contractors Association of Detroit was organized here last week for the purpose of dealing with problems common to firms that are licensed and bonded by the city of Detroit to sell, install, and service refrigeration equipment.

Because all air conditioning dealers and contractors hold a license to handle refrigeration, with the exception of those handling small packaged equipment, the association will be open to air conditioning contractors, commercial refrigeration firms, as well as independent service men.

"Ultimately this was to reach the point where many existing machines were converted to operate with methyl chloride as the refrigerant."

### GOV'T PREPARES ALLOCATION PLANS OF 'FREON' GASES

"In more ways than one the industry helped in the defense program."

### Carolina Parts Jobber Sets Out Scrap Box For Defense Metals

Henry V. Dick & Co.  
Columbia, S. C.

Editor:

Several days ago, we secured a large wooden box, placed it in the front of our store with the sign "Donate your scrap metal for defense" upon it.

This box has already been filled once, to the extent of 200 lbs., and is well on its way again.

For example: A service man comes into our store with an old expansion valve to be duplicated. After the valve has been purchased, the old valve goes into the "scrap box." We then turn over the contents of the box, after it has been filled, to the authorities in charge of the national campaign.

E. S. DIGGLE, Branch Mgr.

"Even as today, a government rating was fine but it didn't necessarily mean you were going to find what you needed. The NEWS continued its campaign to secure proper recognition for the industry."

### Repair Parts Priorities Aren't Enough

## Refrigeration Town Meeting Asks Naming of Committee to Carry Fight for Dealers' Existence

DETROIT—Determined to do their part in explaining refrigeration's essentiality to America, 121 men connected with the distribution of refrigeration equipment came from all parts of the country to the offices of AIR CONDITIONING & REFRIGERATION NEWS, Sept. 10, and staged a free-for-all discussion on ways and means of making their voices heard.

After a long afternoon of suggestions and counter-suggestions, of recitals and of the priorities-and-supplies problems of parts jobbers, of household refrigerator distributors and dealers, and of commercial refrigeration and air conditioning sales firms, it was agreed that a committee should be formed embracing all non-manufacturing branches of the industry.

"Despite its preoccupation with the defense program, the industry made gains along several lines. Here was a novel twist in the merchandising of room coolers."

### Building Rents Room Coolers To Tenants for \$35 Every Season

ST. LOUIS—So satisfactory was last year's plan for renting room coolers during summer months to the doctors and dentists who occupy offices in the Beaumont building here that the building management added 10 renters this year to the 30 original users. A flat rate of \$35 is charged for the 3-month period.

"Judging this story in the light of current events, the immediate reaction of 'here we go again' would indicate that the government has acquired little knowledge about copper over a 10-year span."

### OPM'S COPPER ORDER CONFUSING TO THE INDUSTRY

#### Monthly Statement of Inventory Demanded from 'Customers'

DETROIT—The orders issued by the Office of Production Management (OPM) placing the use of copper under a system of mandatory control has resulted in considerable confusion, right now at least, among suppliers and purchasers of copper products in the refrigeration industry as to just what they are supposed to do.

"To refrigeration goes credit for many advances made in the science of medicine and surgery, and the NEWS kept close tab on such vital contributions made by the industry."

### Surgical Experiments Reveal Great Possible Advantages of 'Cold' as an Anesthetic

DETROIT—Tremendous possibilities in the field of surgery, particularly with reference to war-time army surgery, have been opened up by the successful application of refrigeration in amputations, according to medical research reports recently made public.

One of the latest operations in which refrigeration is used as the anesthetic, performed at Grace hospital here, was proclaimed highly satisfactory by the doctors responsible, Dr. Karl Newman, who for the past two years has been experimenting with refrigeration as it applies to medical problems, and Dr. C. S. Kenney, surgeon.

Here was indication 10 years ago of trend in the commercial sales field that has aroused increasing interest in war."

### Complete Fixture Service for Restaurant Trade Piles Up Orders for Southern Firm

BIRMINGHAM, Ala. — A "one stop" service whereby a restaurant, grocery store, or other food-handling establishment may be outfitted in toto from top to bottom is making the cash register ring for Alabama Fixture & Refrigeration Co. here.

get extra sales with



radar

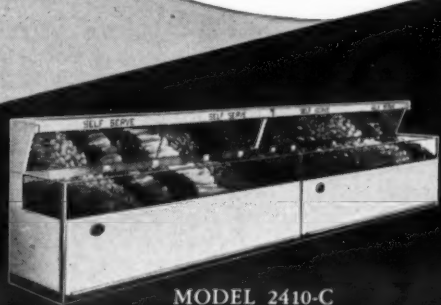
Remember

Atomized air keeps food best

Directional flow cuts power costs

And

Recirculated air saves on running time, uses cold air over and over, instead of drawing in a continuous fresh supply of warm air...



MODEL 2410-C



MODEL 3008-C (FROZEN FOOD)



MODEL UL2710-C



MODEL 2906

and SHERER will help you close more Refrigerated Display Case Sales for Only Sherer gives you these sales-clinching features.

✓ **ATOMIZED AIR**  
✓ **DIRECTIONAL FLOW**  
✓ **RE-CIRCULATED AIR**

Write For Complete Details Of Sherer Franchise

Name .....

Address .....

City ..... State .....

SHERER-GILLET COMPANY, DEPT. AC, MARSHALL, MICHIGAN





"Pearl Harbor! The electrifying radio flash that Sunday afternoon came as the industry and the NEWS were preparing for the Fourth All-Industry Show. It was postponed."

## Refrigeration Will Help Win the War

### Let's Go America

Japanese "Statesmen" must be a passel of idiots. Surrounded by enemies, poor in natural resources, the Japs yet dare to pick a fight with the biggest producer of air-planes and ships in the world.

She asked for it, and now she's going to get it. Right between the eyes. Our Navy ought to smack her so hard and so often that she won't recover for a hundred years.

This industry, of course, can be counted upon to redouble its efforts for the national defense. That will include increased speed on armament contracts and sub-contracts, and plenty of refrigeration equipment for the big new army and navy cantonments which will be built. Plus, of course, refrigeration for civilian food supplies. Refrigeration is just as important now, of course, as it was a week ago.

"Air conditioning to the rescue. Although this excellent suggestion has not yet been generally adopted, actual installations have proved its validity."

## 'Air Conditioning's the Answer To Lagging Steel Production'—Carrier

WASHINGTON, D. C.—Air conditioning of blast furnaces in the nation's steel mills to increase production and thus forestall the iron and steel shortage anticipated this spring because of the rising demands of defense activity has been suggested by Willis H. Carrier.

"Government restrictions on such things as aluminum ice cube trays to conserve materials for the defense program found enterprising dealers coming up with graphic explanations."

## Flags Replace Trays as Dealer Appeals To Buyers' Patriotism

HILLSDALE, Mich.—H. G. Bogart, General Electric dealer here, gets around the temporary shortage of ice trays with new refrigerator models by reminding buyers that this sacrifice is part of their contribution to the national defense program.

In his 6-ft. models, for example, which are delivered with two ice-trays instead of the usual four, Mr. Bogart inserts in the vacant ice tray space a small card, to which is attached an American flag reading: "We are instructed by the United States Government to deliver not more than two aluminum ice trays with any 1941 refrigerator."

"This is part of your contribution to the Defense program."

1941

## MILESTONES FOR INDUSTRY, PEOPLE, COMPANIES, TRENDS

New Self-Service Dairy Refrigerator Added By Tyler Fixture

REFRIGERATION PLANT OPENED BY MILLS

Servel 'Supermetic' Hermetic Model Shown In East

La Crosse Markets New Milk & Beer Coolers

Commercial Cabinet Maker Substitutes For Stainless Steel

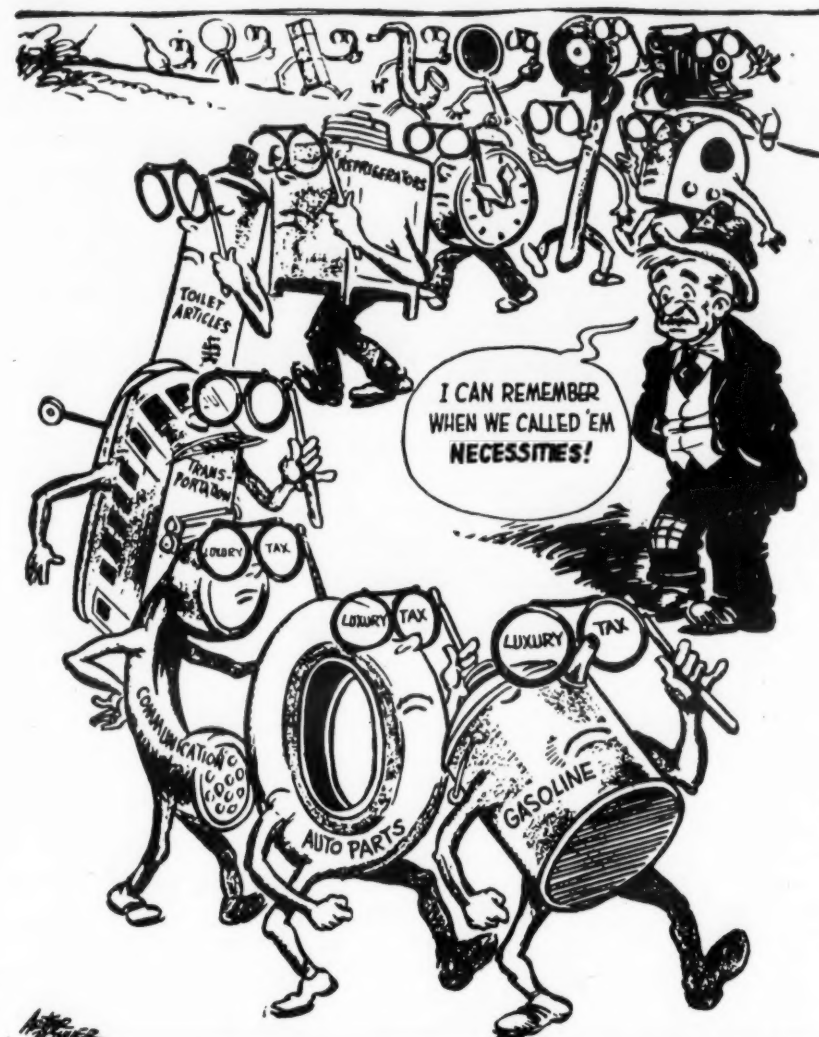
GRAND HAVEN, Mich.—How one manufacturer of commercial refrigerators is proposing to substitute for stainless steel on which governmental restrictions for defense use have been placed, is described in a bulletin just issued by Puffer-Hubbard Mfg. Co. here.

Kold-Hold Buys Savage Truck Plate Division



"Even the daily papers could not quite agree with the thinking in Washington that suddenly made refrigerators and many other needed items become luxuries."

## High-Hatting Him



—The Detroit Free Press.

"Helping the industry to get a fair share of the materials available so it could contribute equipment so necessary to the war effort was a prime responsibility assumed by the NEWS."

## Why Commercial Refrigeration Should Receive Materials

"Increasing tempo of the defense program is felt by the appliance industry when the government moves to conserve aluminum supplies."

"As it turned out, it never had to be used, but what are the odds on the next one?"

## Refrigerator Ice Tray Quota Is Cut More Than Half by OPM

WASHINGTON, D. C.—All new refrigerators sold in the United States henceforth will carry less than half the usual quota of aluminum ice trays, following an order issued March 6 by the director of priorities, Office of Production Management.

"Trade associations are sometimes hamstrung by legal restrictions which limit their range of activities. It was helpful to have some enlightenment."

## What Associations Can Legally Do Is Indicated In Decree

WASHINGTON, D. C.—The fog of uncertainty surrounding certain business practices which has so long plagued many manufacturing concerns was partially dispelled in the consent decree recently entered into by electrical connector producers and the U. S. Department of Justice.

## 3-Hp Conditioning System Serves Bomb Shelter Designed To Hold 30 People

HAMILTON, Ohio—First air conditioned bomb shelter ever exhibited in the United States was shown to throngs of visitors attending the Hamilton-Butler County sesquicentennial celebration here recently. Built of steel, the bomb shelter has been equipped with a Chrysler Air-temp 3-hp. air conditioning system for the safety and comfort of occupants. Capacity of the shelter is about 30 persons.

"The industry did all it could in an effort to conserve materials desperately needed."

## MAKERS OF EXPANSION VALVES ADOPT REPAIR POLICY TO SAVE METAL

"There was a war boom for some industries, but that wasn't the kind the government lowered on the household boys."

## Household Refrigerator Production Will Be Cut 50% To Conserve Defense Materials

150,000 Units Per Month Set As Quota Now

"Although this ruling was made specifically in connection with automobile parts, its implications were of interest to the refrigeration field."

General Motors Dealers May Buy Parts from 'Outside Sources,' FTC Rules

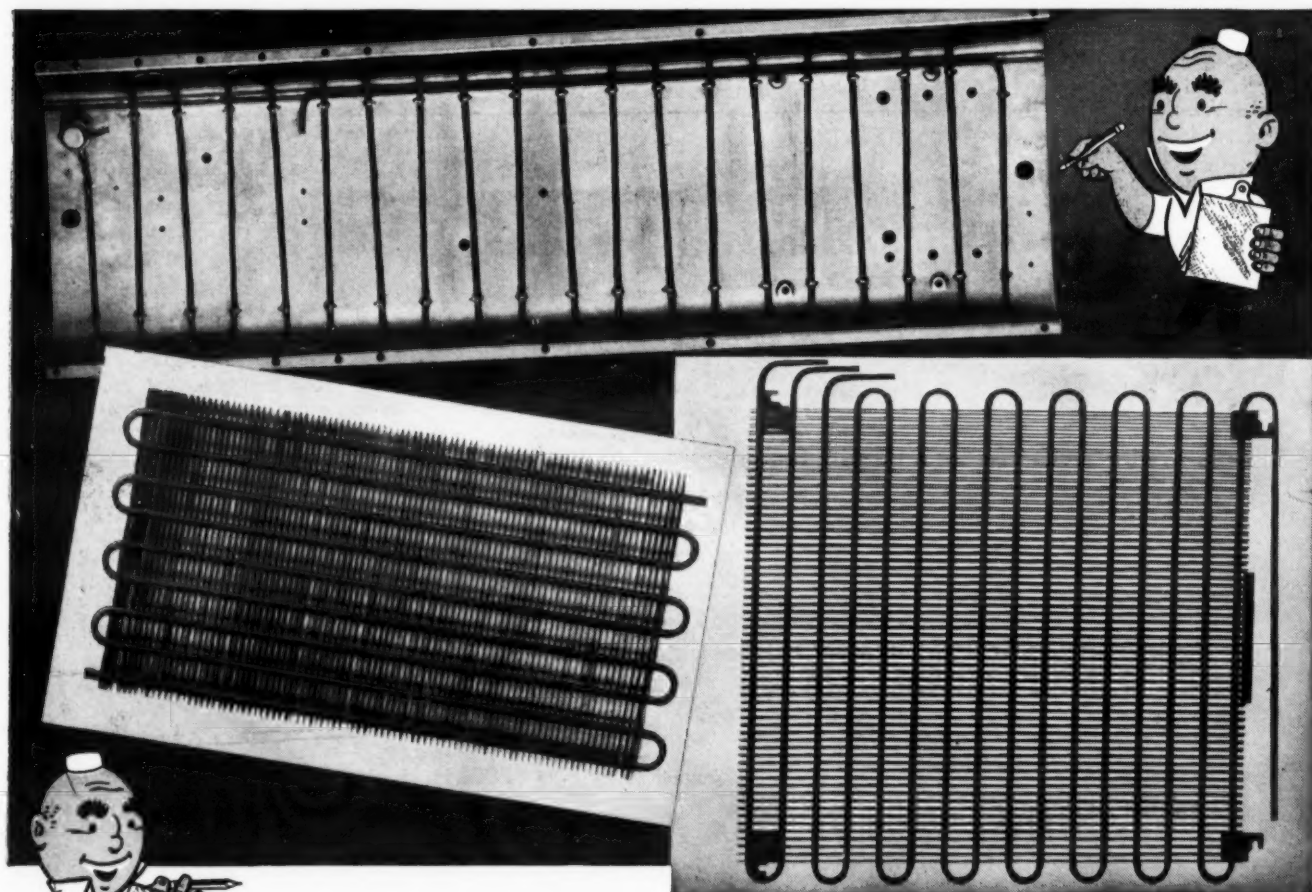
"While there was still something to sell, the fair sex came to the rescue."

## SalesWOMEN Replace SalesMEN as Manpower of U. S. Is Called To Arms and Defense Plants

CHARLOTTE, N. C.—With the draft and widening demands for labor reducing the supply of salesmen, women are being trained to sell in a series of schools being conducted by Southern Bearings & Parts Co.

"This story appeared in an October, 1941, issue of the NEWS, so obviously the lady was doing all right."

Woman Sells 250 Units Since February



## Bundyweld . . . ideal tubing for any condenser

Bundyweld's construction and physical properties make it the ideal refrigeration tubing for your plate, wire, or fin and tube condensers. Bundyweld is the only tubing double-walled from a single strip, with a

patented beveled edge. It's copper-brazed through 360° of wall contact into a stronger walled yet thinner walled tubing of great bursting strength and excellent heat transmitting properties. Bundyweld is leakproof. It's

smooth and clean inside and out.

### Serpentine bends

You can easily bend Bundyweld to short radii without danger of weakening it. But if your condenser design poses bending problems, call in our engineers for advice. Or if you choose, we'll produce your condenser tubing parts. (Our serpentine benders have a well-deserved reputation for producing better and more uniform bends.) Write us today.

Bundy Tubing Company, Detroit 14, Mich.

# Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

### WHY BUNDYWELD IS BETTER TUBING



Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lapham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Rutan & Co., 1717 Sansom St. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4755 First Ave. South • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 881 Bay St. • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.



NOTE the exclusive patented Bundyweld beveled edge, which affords a smoother joint, absence of bead and less chance for any leakage.

SIZES UP TO 3/8" O.D.





"The shortage in 'Freon' refrigerant was being aggravated by a shortage in cylinders to transport it. Suppliers strove mightily to dig cylinders out of hiding and keep them in the channels of distribution."



"Here was a plan instituted by a patriotic supplies wholesaler designed to get much needed old parts or at least scrap metal."

### Supply Jobber Takes Used Fittings and Parts In Payment of Delinquent Accounts

'Exchange' Plan Conserves Materials, Benefits All

DALLAS—The refrigeration supplies jobber in search of new ways of liquidating his delinquent accounts may find at least a part of his answer in the experiences of U. C. Boyles, head of Refrigeration Supply Co., Dallas parts jobber.

Boyles began to think of such ac-

"Continued clamor about repair parts did pay off when the industry was given a relatively simple, workable priority for essential commercial refrigeration repair parts."

### Store, Restaurant Refrigeration Repairs Get A-10

Simple Endorsement on  
Purchase Orders Is  
Way To Extend It

WASHINGTON, D. C.—The long-awaited A-10 rating for repair of refrigeration equipment in stores and restaurants has been granted by the War Production Board, in an amendment to Preference Rating Order P-100.

The priority under P-100 is easy to apply, an endorsement on the face of the order by the man applying for the rating being sufficient.



"The various elements of the refrigeration industry began to fall into their proper places in the War program."

### Commercial Refrigerator Industry Now Taking Its Place on the 'Second Front' With Food Conservation Its Big Job

Message from the President of the CRMA

By J. W. Hart, Vice President, McCray Refrigerator Corp., and  
President, Commercial Refrigerator Manufacturers' Association

### 'This World War Is Rapidly Becoming An Air Conditioned War'

Air Treatment Speeds Up Production  
Of Many Vital War Materials

NEW YORK CITY—"World War II is becoming an air conditioned war," declares a recent issue of "Time" magazine.

"This startling fact was underscored when OPM materials chief

William Batt told air conditioning makers they could get top-rung priority on all blast-furnace installations. In fact, steel companies will be urged to air condition, can have RFC money to pay for the jobs."

### BULLETIN!

#### Prevent Freon Shortage

At the urgent request of the War Production Board, the NEWS requests all subscribers who may have empty "Freon" cylinders in their possession to return them to Kinetic Chemicals, Inc., Carney's Point, New Jersey, before March 10.

"In the fight to get a priority rating for the absolutely essential refrigeration repair parts, various industry committees and the NEWS had to keep hammering away to get the necessary attention in Washington."

## What Has Been Done About REPAIR PARTS?

Managing Editor Relates the Story of Efforts by  
Industry Committees and the News to Secure  
High Priority Rating for Needed Replacements



"The industry quickly developed programs to keep existing equipment in operation. Servicemen might well heed the points in the serviceman's program in their present operations."

### Voluntary Program For Conservation of Vital Materials and Equipment in Operation Adopted By Refrigeration and Air Conditioning Industry

#### Serviceman's Program

If an operator, maintenance, or service engineer, I will...

1. Keep machines running efficiently and smoothly. Check performances. Conserve electricity, fuel, and power.

2. Find all leaks and repair them as soon as possible. Be sure not to add refrigerant until leak is found and repaired. If necessary, remove refrigerant and transfer it to an approved container. Avoid purging to the air. Check shaft seal. Tighten gasket joints.

3. Check compressor oil level. Oil motor bearings and keep them oiled.

4. Keep motors operating efficiently. Clean commutators and brushes. Replace worn bearings.

5. Check belt alignment and tension. Conserve rubber.

6. Blow off condenser surface on air cooled machines. Be sure that air supply is adequate.

7. Clean condensers on water-cooled machines. Be sure there is no partial stoppage. Be sure that the water valve is set to maintain economical condensing pressure. Clean regulating valve and strainers.

8. Check insulation for moisture, deterioration and tightness. Replace if defective.

9. Make certain that tools and equipment are in good order. Clean and check tool kit.

10. Check stock of parts, fittings,

and supplies.

11. Return empty refrigerant cylinders to suppliers without delay.

12. Give prompt service. Be sure of the diagnosis of the trouble. Avoid guesswork. Plan work to save time and tires. Concentrate effort, avoid repeat calls. Study service manuals and manufacturers' information.

13. Check expansion valve if crankcase runs cold.

14. Remove oil from rubber mounting blocks.

15. Clean evaporator surface.

16. Advise and publicize my ability and desire to aid.

17. Instruct users in procedure in an emergency.

### Ideas on How To 'Repair' Instead of 'Replace' In Appliance Service

MANSFIELD, Ohio—Repair instead of replace is the theme of a service conservation appeal which L. K. Baxter, Westinghouse Merchandise Service Manager, has issued to all men responsible for servicing Westinghouse appliances. He has called for renewed conservation efforts in using sparingly the existing replacement parts now in dealer, distributor and factory stocks so that they can be stretched over the longest possible period to give the best service to the greatest number of customers.



located in the eastern and central time zones are required to limit their inventories to twice the dollar value of sales of the specified type of supplies which they shipped from stock in the second preceding calendar month.

"An 'exchange' plan on repair parts was another way of conserving materials."

### 'Exchange' Plan On Repair Parts Is New Policy

DETROIT—To aid in the nation's drive to salvage all available metal and to keep in line with the copper conservation orders, a number of manufacturers of refrigeration parts are putting into effect a policy of shipping parts, especially of copper, on a basis of an old part exchanged for each new one shipped.

### MILESTONES

WAMPLER IS ELECTED  
CARRIER PRESIDENT

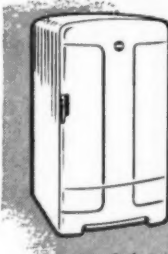
A-P Combines Filter,  
Dryer In Single  
'Trap-Dri' Unit

TRANE MAKES THREE  
VENTILATORS FOR  
BLACKOUT USE



Ten cu. ft. of self-defrosting refrigerator  
ten cu. ft. of budget-wise freezer.  
All in one Beautiful Cabinet!

Individual Thermostatic Controls • Roomy Meat and Vegetable Drawers • Separate Doors • One Sealed-for-Life Compressor • Needs only 30 x 36 inches of floor space



Model 14  
14 cu. ft.



Model 18-5  
18 1/2 cu. ft.

Advanced Upright Design  
Separate Compartments  
Cold-Hold Inner Doors  
Therma-Seal Protection  
Fiberglas Insulation  
Needs only 30 x 36 inches of floor space

### MANITOWOC EQUIPMENT WORKS

Manitowoc, Wisconsin

Gentlemen:

Please rush me all the details on your SUB-ZERO freezers and the new Ten-ten.

NAME .....

TITLE .....

COMPANY .....

ADDRESS .....

CITY ..... STATE .....

☐ DISTRIBUTOR ☐ DEALER

MANITOWOC EQUIPMENT WORKS  
A Division of Manitowoc Shipbuilding Company Manitowoc, Wisconsin

### How To Keep Refrigeration Going In Stores, Restaurants, Plants

### 14 Things That the User Can Do To Make His Refrigeration Equipment More Efficient.

By John H. Spence, Commercial Refrigeration Engineer,  
Allied Store Utilities Co.





One day in April, 1942, General Electric's factory employees took time off to watch the last refrigerator move off of the assembly line. After flash bulbs had popped to preserve the scene for posterity, the employees went back to their work of turning out war goods for Uncle Sam.



"Wonder how many present refrigeration servicemen and contractors were at the Camp Lee school?"

## Army Refrigeration School at Camp Lee, Teaches Men To Service Any Kind of System, Anywhere

"As more and more low-temperature equipment came into use in industrial applications, the industry sought more knowledge about installation and servicing."

## How To Service Two and Three-Stage Units for Low-Temperature Work

**Editor's Note:** In order to aid the service engineer in rendering proper field service to two and three-stage condensing units which are now being used extensively in war plants for the testing of airplane parts, Paul B. Reed, service manager of the electric refrigeration and air conditioning division of Servel, Inc., has prepared a series of two articles on the operation and servicing of these units. The first article which appears below, discusses the cycle of operation and then takes up certain definite service problems which the service engineer may be called upon to correct.

### THE MASTER SERVICE MANUALS — — —

— — — and other books of the Refrigeration Library are depended upon as textbooks in trade schools from coast to coast. BUSINESS NEWS PUBLISHING CO., DETROIT

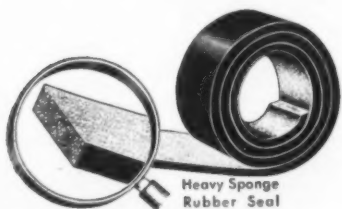
## DOOR GASKETS FOR REFRIGERATORS & COOLING ROOMS

For nearly a quarter of a century JARROW PRODUCTS has specialized in designing refrigerator door gaskets to meet the most exacting standards of original equipment manufacturers. Embodying matchless quality with precision workmanship, Jarrow Door Gaskets offer the ultimate in efficiency and endurance.

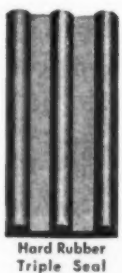


### HEAVY DUTY SEALING STRIP

For Heavy Freezer Doors, Walk-In Coolers, Refrigerated Trucks, Etc.



Heavy Sponge Rubber Seal



Hard Rubber Triple Seal

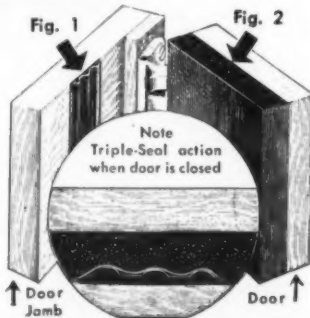


Fig. 1



Fig. 2

Note

Triple-Seal action

when door is closed

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"Mobility the Army asked for, and 'mobility' and 'flexibility' it got in the field refrigeration units it sought for the Armed Forces."

## Army Demands the Latest In Refrigeration With Planning Based on 'Mobility' of Units

Army Engineer Explains Principles of Designs

By Andre Merle, Refrigeration Engineer, U. S. War Department

Extended fin surfaces and other developments in refrigeration work have been made use of in Army construction. And why not? It would appear to this writer that to design apparatus for Army use which did not follow the trend as now exists in the refrigerating industry would not

make sense. We don't want to find ourselves in the position whereby we would have to call for equipment which was in any way special, as far as commercial refrigeration practice was concerned.

The thinking that an open specification, calling for modern apparatus as actually in use "today" with no petty limiting features, is the best practice, will win out in the long run. The firm which submits the best bid as per contract plans and specifications at a reasonable figure, and lower than the next bidder, is still, in the writer's opinion, entitled to the job.

"Storage of whole blood became more and more important for civilian as well as military needs."

### Standard Cabinets Prove Adaptability As 'Blood Banks'

MARSHALL, Mich.—Regular commercial refrigerators supplied by Sherer-Gillett Co. here are being used as "blood banks" in hospitals operated by the Sisters of St. Joseph in Flint and Kalamazoo, Mich.

"The question of who had the right to own and use an automobile was one of the big ones for the home front to solve."

### Cars Must Be Definitely Converted for Certificate of War Necessity, Rules ODT

WASHINGTON, D. C.—Owners of passenger cars are not eligible for Certificates of War Necessity unless "the vehicle has undergone a genuine structural change, reasonably permanent in nature, which makes it likely that property, rather than passengers, will be carried," the Office of Defense Transportation has declared.

"One thing that developed quickly in wartime was cold treatment of metals, the reason being that it speeded production, improved precision operations."

### How Refrigeration Serves In Metal Treatment

NEW YORK CITY—Refrigeration compressors have gone into war production work with many strange duties, the Compressed Air Institute shows in a study of War uses.

Refrigeration machines are given such tasks as chilling airplane instruments, freezing pitch on optical lenses, and providing rigorous work-outs for the molecules in high precision gauges.

In the process of manufacturing the gauges, to prevent the annoying tendency to grow, the gauges are placed at various times in refrigerators which develop temperatures as low as -75° F.

One manufacturer stores them at sub-zero temperature until they are thoroughly chilled and then rough grinds them. After rough grinding, he places them in the box again and keeps them at the sub-zero temperature for 48 hours.

After removal once more, they are finish ground and lapped to size. The manufacturer reported "experience has shown that they do not change after this treatment. Rejections due to 'growth' have dropped to a minimum."

Another manufacturer reported that after the steel in his gauges is ground to within 0.002 in. of finish size, the parts are kept from six to eight hours at -40° F. and then taken out of the refrigerator. When the temperature of the metal reaches 70° F., it is finish ground and lapped.

"In general, for carbon and vanadium steels as well as manganese non-deforming steel," a third manufacturer reported, "we usually submit the piece before the final grinding to the following treatment: (1) Temper at 300° F. for suitable length of time and cool to room temperature; (2) Cool at least to 70° F. and hold for a suitable length of time and then allow the piece to come back to room temperature."



In 1942, Jewett adapted its famed "Beer-ador" beverage cooler to a blood bank refrigerator.



"Not too many plants were built in just this way, although the idea has plenty of merit."

## 'Ideal War Plant' Egg-Shaped, Air Cooled, Bacteria-Proof

Westinghouse Expert Described Main Features Of a Fully-Protected, Peak Production Plant

EAST PITTSBURGH, Pa.—George H. A. Parkman, Westinghouse construction expert, recently drew up the recipe for the "ideal war factory"—a blackout, bomb-resistant, windowless building from which vital military machines and armaments would flow 24 hours a day, uninterrupted by air raids or sabotage.

The building would be made of reinforced concrete, with an arched "eggshell" type roof, to save time and steel and to provide a structure that would suffer least from bombing, sabotage and fire.

Air conditioning is essential in such a windowless plant to provide fresh air for workers, remove fac-

tory fumes and regulate temperature and humidity.

Proper temperature control, through air conditioning, permits employees to work faster in comfort. To eliminate stale air and prevent a feeling of laziness and loss of appetite, it is necessary to supply replacement air at the rate of 15 to 30 cu. ft. a minute for each occupant.

Experiments in blackout plants built this year have shown Westinghouse engineers that the best way to air condition such a factory is by a number of small cooling units located in various sections of the building. Damage to one unit would not affect the operation of all others.

# Congratulations TO THE News ON THIS THEIR 25<sup>th</sup> Anniversary

SEEGER REFRIGERATOR COMPANY, ST. PAUL PLANT



We take pleasure in congratulating the AIR CONDITIONING AND REFRIGERATION NEWS on their 25th Anniversary.

As one of the early advertisers in the AIR CONDITIONING AND REFRIGERATION NEWS Seeger has enjoyed its relation with this publication for the past 25 years.

We feel that the AIR CONDITIONING AND REFRIGERATION NEWS has done a splendid job by covering the news and facts in the refrigeration field.



SEEGER REFRIGERATOR COMPANY, EVANSVILLE PLANT

# SEEGER

CONTRACT MANUFACTURERS OF ELECTRIC REFRIGERATION





Parades like this were familiar sights during the war years. They helped to point up industry's contribution to the war effort. The Refrigeration industry was proud of the fact that so many of its normal products were of prime importance to the war effort both directly and indirectly.



"Widespread interest which developed in the home freezer early in the war could be justified on a sound economic basis, not to mention all the other advantages that were offered."

## Advantages and Savings Justify Cost of Home Freezer, Utility Official Finds

### Owner Computes Actual Operating Expenses & Thinks They're Okay

BOSTON—Cost of owning and operating a home freezer is justified by the advantages and savings such a unit makes possible, believes O. B. Swift of the New England Power Service Co., who described his experiences with a quick frozen chest in a broadcast over the New England Farm Hour recently.

In determining the costs of their units the Swift's figured as follows:

"We were using food from the chest at the rate of about three lbs. a day or 1,100 lbs. of food a year for a family of five. For a year we had a separate electric meter connected to it and found that it used an average of 2.3 kwh. a day. This costs about \$25 a year on a typical electric rate.

"In a proper cost analysis one must assume a charge for interest on investment, maintenance, and depreciation, although people seldom subject household equipment to such scrutiny.

"In my own case I am allowing 10% or \$26 a year for this. That means it costs me \$51 a year to own and operate the chest. Applying this charge to the 1,100 lbs. of food results in a cost of 4½ cents a lb. to preserve and store it. With a normal supply of meat and commercially frozen food available the use would increase to at least four lbs. a day. This would lower the above costs to 3½ cents a lb."

"Many people were encouraged to make their own repairs because servicemen were scarce. Most of them would have done better if they had waited for the serviceman."

### 'FIX IT YOURSELF'—THEN DUCK

SALT LAKE CITY—Many blasts, verbal and editorial, have been touched off by the shortage of skilled service men and the resultant food spoilage and food poisoning, but one of the loudest blasts occurred here recently when one George H. Garfield, householder, attempted to repair his own refrigerator, by using his own methods.

Apparently a refrigerant line in Mr. Garfield's old Majestic sealed unit became clogged, causing the pressure switch to cut out the motor.

Determined to fix it himself, Garfield blocked out the switch to let the motor continue running.

Friends who visited Garfield at the hospital later said that, though severely injured, he will probably recover.

## Distribution Channels Have Defied Crackpots 'Death Sentence'

Problems In Selling Field After War Are Analyzed By J. J. Nance

"There was all kinds of speculation as to whether the industry would return to the prewar pattern of distribution after the fighting was over, but the fact that most distributors survived the rough early months of the war plus the expressed desire of many others to get into the business postwar led this industry figure to predict that conventional channels would be retained."

"New ways in which refrigeration could speed the development of war goods were reported regularly by the NEWS. This was perhaps the first really definitive study on how proper application of commercial systems helped improve welding techniques."

## Refrigerant-Cooled Spot-Welding Electrodes

By Dr. F. R. Hensel, Metallurgical Consultant, P. R. Mallory & Co., Inc.; E. I. Larsne, Div. Manager, Metallurgical Engineering Dept., P. R. Mallory & Co., Inc.; E. F. Holt, Senior Research Engineer, Metallurgical Engineering Dept., P. R. Mallory. Presented at the annual meeting of American Welding Society.

"The 'portable' refrigerators which the Armed Forces found so valuable in bringing fresh food to the various theaters of war were not the postwar 'midget' portables but large self-contained reach-ins and walk-ins."

## Portable Refrigerator Is Industry's Contribution to Forces in the Field

Mooney Tells How 'Thinking' Was Pooled to Develop Units

CLEVELAND—At the Naval War College, relates Mark Mooney, manager of refrigeration sales for Carrier Corp. is a never-erased sign which reads:

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The Navy—and the Army—knows that its men must have these things in order to wage war effectively. And the significance of this to the refrigeration industry, declared Mr. Mooney in addressing the spring meeting of the A.S.R.E. on "Mobile and Portable Refrigerators for the Armed Forces," is that "rations" to the U. S. fighting man means the kind of foods he's had all his life, and that means that refrigeration is a vital necessity for giving him such foodstuffs.



"That unfulfilled demands for refrigerators and other appliances were gradually building up during the war years was a fact that seemed to escape many of the experts until the war ended and the public scrambled for anything it could get."

## Will the '42 Model Come Back at War's Close?

DESIGNER CLAIMS PUBLIC WON'T ACCEPT '42 MODEL

### Makers May 'Educate' Buyers To Expect Them

"Shortages and rationing of meat and other foods brought into sudden prominence an item that had been quietly developing—the home freezer. Quite a variety of makeshift cabinets of varying quality were being eagerly purchased by the public in an effort to get some kind of home freezer."

Cornell Conference Suggests Changes In Design of Home Freezer Cabinets

ITHACA, N. Y.—In a conference called to discuss the advent of development of the home freezer cabinet, its place in the household equipment field, and in the refrigeration industry, and to determine methods to make correct use of the cabinet in the home, the Food Processing and Research Council of Cornell University organized about a year ago, was host to a group May 19, the conference beginning under the direction of the School of Nutrition and the Federal Nutrition Laboratory.



"Most refrigeration men have always enjoyed a 'bull session.' Developments like this, though, made them stop and look as well as wonder."

## Refrigeration Serves To Broaden Range of Bull's Activities

LUBBOCK, Tex.—With the help of a refrigeration system, Texas bulls are finding it easy to sire 500 calves a year anywhere in the western hemisphere by a long-distance method developed here lately at a cattlemen's association experimental laboratory.

By refrigerating sperm extracted from a bull to 40° F. and holding it at that temperature, cattlemen have discovered that the sperm remains alive for a period of 10 days which allows time for it to be flown from Texas to Argentina, Chile, or Brazil where the propagation of beef cattle is being speeded up in this locality.

"There were so many service calls and so few men to handle them that firms took extraordinary measures to keep all the equipment possible in operation."

### 'Investigator' Calls First, Saves Time on Air Cooling Repairs

MONTGOMERY, Ala.—Whenever a call for any type of repair or start-up service work comes into the office of the Charles D. Bailey Co., heating and air conditioning firm here now specializing in repair work, an "investigator" is sent out before the serviceman comes. This simple idea has saved as much as 10 hours a week in wasted time, and helped the company immeasurably to keep up with its request volume.

"What wound up doing yeoman duty as the bug bomb in malaria-infested war areas had gotten its start in life as a can which would contain the exact charge of refrigerant required for a hermetic system."

### Westinghouse 'Gas' Charger Is Now Soldier's 'Health Bomb'

MANSFIELD, Ohio—Small "steel can" charging bombs originally developed for filling electric refrigerators with refrigerant have proved design for an insecticide gun being used now by the U. S. Army Medical Corps to exterminate mosquitoes.

"It took a long time to convince some people that refrigeration was essential."

## Potato Shipments Rot Without Refrigeration

### Shows What's Coming As Refrigeration Is Neglected

NEW YORK CITY—A smashing demonstration of how failure to maintain the food preserving functions of refrigeration will aggravate the nation's food shortage was made here the week of June 7 when huge parts of the potato shipments rushed into New York City rotted in transit because they were shipped without refrigeration in accordance with orders of the Office of Defense Transportation.

"Removing odor from air meant that the amount of outside air brought in for ventilation could be greatly reduced and much more air recirculated. This, in turn, would lower cooling requirements and costs or expand the capacity of existing equipment."

### 'Fortune' Sees Odor Absorber Unit Boon to Spreading Out Postwar Air Conditioning Markets

DETROIT—How "odor absorbers" function as "load reducers" in air conditioning systems is discussed in a commentary in the March issue of "Fortune" magazine.

While present applications of the system developed by W. B. Connor Engineering Corp. are largely related to wartime needs and a necessity to reduce the use of critical materials, "Fortune" foresees the use of "odor absorbers" in postwar development of the air conditioning market on a much broader scale than the pre-war stage reached by the industry.



"Renewed interest in home freezers since the Korean war began is partly the result of the well remembered days of World War II plus, we think, growing acceptance."

## 'DEEP-FREEZE' BOOM & ICE CREAM CABINETS

Phenomenon of the current civilian refrigeration market is the almost frantic demand for "Deepfreeze" units or any reasonable facsimile thereof. By midwinter the supply of low-temperature food storage cabinets had been practically exhausted. Buyers then turned to rehabilitated ice cream cabinets.

They are still crying for them. Rehabilitating old ice cream cabinets and selling them to eager food hoarders has become the bonanza.

Outside of syphoning off some excess purchasing power, adding to the nation's food storage facilities, and helping hundreds of hard-pressed dealers stay in business a little while longer by providing them temporarily with high profits and fast turnover, this "Deep-Freeze" boom has other values.

"Expansion fits made possible by low temperature refrigeration were used extensively to meet exacting requirements of war production. It was also found that in many instances low temperature treatment had a stabilizing effect."

## Cold Treatment Of Metals

By W. A. Phair, Western Editor, "The Iron Age"

Broadly speaking, this interest in sub-zero temperature is along two approaches. One is the theoretical investigation of the effect of temperatures, of say -100° F. and lower, on such characteristics of metal as ductility, hardness, change in volume, etc., or, to use an all inclusive phrase, the stabilization of the metal.

The second aspect of cold treatment is the practical use of the shrinking effect of low temperatures on metal for the purpose of providing temperature differentials, without restoring to high temperatures, for giving close fits between mating parts in assembly.



fect of low temperatures on metal for the purpose of providing temperature differentials, without restoring to high temperatures, for giving close fits between mating parts in assembly.

"Shortages of refrigerant and skilled servicemen gave rise to an alarming number of incidents and accidents. Just exactly what happened to cause the death of the theater maintenance man was never known, but methyl chloride had been charged into a system designed for 'Freon,' a substitution that requires care and knowledge to be successful."

## THEATER SYSTEM DEATH BRINGS A MURDER CHARGE

Manager Who Authorized Refrigerant Change Held In Memphis Incident

"Food spoilage losses were becoming almost a national scandal because the government did not recognize the importance of refrigeration to the war effort and the necessity of keeping an adequate force of trained servicemen available for maintenance and repair work."

## BREAKDOWNS IN FOOD PRESERVING SERVICES PILE UP

Chicago Icemen 'Frozen' In Their Jobs; Why Not Ref. Servicemen?

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**AUTOMATIC CONTROLS**  
better check  
**GENERAL CONTROLS**

Thermal Expansion Valves... V-200 Series. For high or low temperature applications suitable for Freon, Methyl Chloride or Sulphur Dioxide. Non-adjustable, adjustable and super-heat models available. External equalizer available on 5-ton models.

V-200 1/2 Ton	V-200 1 Ton	V-200 2 Ton	V-200 5 Ton
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"Seven associations serving all factors of the refrigeration industry combined their forces in organizing a single small group that could represent the industry as a whole."



"Paul Reed began writing regular columns for the NEWS on refrigeration service and maintenance problems. During the war years he wrote specifically about Army refrigeration problems."

## INDUSTRY COUNCIL IS FORMED!

### Leaders of Refrigeration Groups Brought Together In New York War Council

NEW YORK CITY—Combining every organized element of the existing refrigeration and air conditioning industry, the National Refrigeration War Council has been organized to mobilize the resources, brains, and manpower of the refrigeration industry to aid the successful and speedy prosecution of the war.

"Where a man worked during the war was not simply a matter of individual choice, aside from the draft problem. Government recognition that servicemen were VIP's, however, was something."

### U.S.E.S. TO HANDLE ALL HIRING OF 'CRITICAL' MEN

WMC Extends Control over Service Men, Engineers In Oct. 15 Regulation



"A splendid example of the refrigeration industry's contribution to the war effort is found in the large scale manufacture of penicillin which did so much to speed the recovery of wounded men besides helping on the home front. Production of the new drug on the vast scale needed would not have been possible without refrigeration."

### Air Conditioning and Refrigeration Play Important Role in Production of Penicillin, 'Miracle Drug'

#### Design Calls for Most Exacting Type Of Conditions to Aid Proper Growth

"New refrigeration equipment could be obtained if your priority rating was high enough. Most people didn't qualify, however, so there was a ready market for items that in ordinary times might have been junked. It took a lot of thinking and hard work, though, to recondition such equipment."

#### It Looks Like a 'Dummy' But Has Many Uses

B. Nolin of Montgomery, Ala. firm fixed up an old meat display case which has had the glass removed and the front covered up for use for reserve storage by a local food concern. Such a fixture might be used for a beverage cooler, turned on its side. And some have also been sold to farmers.

"A method of forming parts out of tubes that were originally invented to cut production costs in the refrigeration industry was found of tremendous value to the war effort because it increased output of heavy artillery ammunition by fantastic amounts with great savings in costs and materials."



"Dramatic incidents like this—and there were many more—brought home to government and citizens alike the necessity for adequate refrigeration if the nation was to maintain its home-front productivity at high levels."

### HIGH WPB OFFICIALS POISONED BY SPOILED FOOD

#### Canton City Health Commissioner Puts Blame on Lack of Refrigeration

CANTON, Ohio—Thirty-four persons, including several high War Production Board officials, became violently ill here June 23 from eating food prepared from ingredients that had not been properly refrigerated.

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

Condensing Unit Volume Will Reach Million in 1948, Terhune Believes

Many New Applications Predicted

FREE LICENSES ARE GRANTED ON AEROFIN 'ENCASED COILS'

McKESSON MANAGES SALES FOR ANSUL

LOCKER PLANT SUPPLY GROUP IS ORGANIZED

W. H. Maxwell Directs Wolverine Tube Sales

New Design Features In York Food Freezer

Farm Freezer Makers Form Association

HIGHAM NAMED V. P. OF UNIVERSAL COOLER

SERVEL REVEALS PLANS FOR GAS CONDITIONER

ALCO VALVE CO. IN NEW 3-STORY PLANT

## Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.



"Full 100% cooperation of manufacturers to show government officials the functional value of so many pounds of material to the war effort when assembled in the form of a water cooler had a beneficial effect."

### Task Committee Proved Worth In Case of Water Cooler Order

Gov't. Agencies Hear Out a Representative Group

By C. M. Cordley, Cordley & Hayes, New York City

"Ingenious refrigeration and air conditioning engineers were devising all sorts of substitutes to relieve the critical demands on scarce metals."



"Use of refrigeration for preserving blood proved a benefit not only to casualties of war but victims of home-front catastrophes."

### Sheet Board Ducts Save Critical Materials In Air Conditioning Jobs

SYRACUSE, N. Y.—How sheet board ducts and casing are being used in air conditioning installations to save huge quantities of critical metal, was described recently by T. M. Cunningham, construction manager of Carrier Corp.

### Boston Night Club Fire Brings Blood Bank Plan

NEW YORK CITY—Frozen blood plasma banks are being set up in a number of hospitals throughout the county by the Office of Civilian Defense for use by local authorities in case of emergencies like the recent Boston night club fire, Office of War Information reports.

"It took a long time to convince Selective Service officials that skilled servicemen were essential if the nation's vital refrigeration equipment was to be kept operating for the well-being and protection of its citizens who were producing the materials required in war."

### Refrigeration Repairmen Get 'Essential' Rating

WASHINGTON, D. C.—Definite instructions for the guidance of local Selective Service Boards to the effect that refrigerator service men are "essential" in activities which contribute to the War effort, and thus eligible for deferment from Selective Service as "necessary men," have been issued by the Selective Service Bureau.

The announcement stated, "the Selective Service Bureau of the War Manpower Commission has advised local boards of 34 essential occupations in repair and hand trade services, in which occupations registrants may be deferred as 'necessary men.'"

## HOW TO SELL REFRIGERATION TO THE PROSPECT WHO SAYS

I NEED NEW EQUIPMENT BUT I DON'T HAVE THE MONEY FOR IT

He is in the habit of paying his suppliers daily.



As a result, at the end of the month there is not enough left to pay large down payments and lump sum monthly payments.

Your Answer Is

## THE METER PLAN

OF DAILY SAVINGS

Your Customer Deposits Just a Few Quarters a Day.



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## MILESTONES

FOR INDUSTRY, PEOPLE,  
COMPANIES, TRENDS

**'Freon-22' Refrigerant  
Now Being Produced  
On Commercial Scale**

**'Sporlan Valve Co.' New  
Name of Spoehrer-Lange Co.**

**PENN INTRODUCING  
NEW WATER VALVES**

**United Buys Midwest's  
Commercial Interest**

**Siegfried Joins Staff  
Of Superior Valve**

**Ashbaugh Vice President  
Of Westinghouse**

**AMANA SOCIETY TO  
MAKE HOME FREEZER**

**Frigidaire Posts to  
Kelley, Brennan**

**New 'Freon' Plant Operating;  
Work Starts on Another**

**Servel Has Plans for  
Hermetic Line**

**MEILINGER IN NEW  
WESTINGHOUSE POST**

**New Small Motor Line  
Introduced by Redmond**

**LAWSON IS PROMOTED  
BY NASH-KELVINATOR**

**Brewer-Titchener Buys  
Green & Sons Assets**

**SEARS DIRECTS SALES  
OF PAR COMPRESSORS**

**Harvester Co. Says It  
Plans Household Unit**

**GLASS & SWANSON BUY  
CHASE SUPPLY FIRM**

**Admiral Names Lee Baker  
To Direct Appliances**

**FARM JOURNAL COMES  
OUT FOR FREEZING IN  
PLACE OF CANNING**



"This was one prediction that turned out to be about 100% wrong."

## Gov't Study Shows Public May Not Rush For Appliances When They're Available

**Many Plan to Use Savings to Build Own  
Home; 'Orderly Market' Is Predicted**

"A Service Manpower committee fought the fight to see that refrigeration repairmen got proper consideration before the man-hungry local draft board."

### NEW COMMITTEE SETUP ORGANIZED IN TRAINING DRIVE

WASHINGTON, D. C.—The National Refrigeration Service Manpower Committee met in Washington, March 28 and 29, during which time conferences were held with officials of a number of government agencies on the procurement and training of new men, and deferment of experienced repairmen.

During its Washington meeting the group made some changes in its own organization.

The manpower committee will continue to function under a new name, "The National Refrigeration Service Council." John Wylie, Jr. of Temprite Products Corp. has resumed the chairmanship of the group and appointed the following new members to the service council: Harry Alter, Emerson Brandt, and Phil Redeker.

"Admiral was one of the first firms to make a definite announcement about a postwar refrigerator, and what Admiral said stood up."

### Admiral Announces Features Of Its Postwar Electric Refrigerator Model

CHICAGO—Admiral Corp. became the first of the "new" manufacturers of mechanical refrigerators to give

some idea of its product plans with the announcement that it will offer a refrigerator with a built-in "freezer" compartment that will have room for the storage of two bushels of frozen foods.

The refrigeration system used in the Admiral models will be in application of the two-temperature system that was used in the Stewart-Warner models. The separate "freezer" compartment will hold temperatures of 0° to 10° F. and will be located in the bottom part of the cabinet interior.



"Some 'home freezers' went to War, being put to use in war plants for 'shrink fit' and other types of speeded-up production methods."

## Converted Sub-zero Unit Cools Valve Inserts to -120° F. for 'Shrink Fit' On Dodge Motor Production Line

DETROIT—A unique conversion of a standard Deepfreeze unit to the "freezing" of steel valve inserts to shrink them so they fit into motor cylinder blocks has just been effected by Dodge Division of Chrysler Corp. and the apparatus installed on the production line at Dodge Main Plant.

This new method of chilling, is claimed to be the most economical devised to date—much cheaper and simpler than the use of the dry ice.

In simple, the object of the freezing is to so shrink the inserts that they will drop into the cylinder and subsequently expand as they return to normal temperature, achieving such a tight fit, or strong joint, that they cannot be pulled out without removing metal.

**Task Committee Report on  
Home Freezers**

**Prepared for the War Production  
Board in July, 1944, by members  
of the Task Committee**

"'Deepfreeze' reports it is still having plenty of trouble on this score. Having developed a good, catchy name, the company discovered that the public was bent on putting it into the language."

### 'Deepfreeze' Out to Maintain Trademark Status

In a communication to editors, the Deepfreeze Division of Motor Products Corp. points out that "a registered trademark such as 'deepfreeze' or any derivations thereof, should not be used in a descriptive sense in any text, otherwise the trademark or its derivatives may become common words of the English language. . . . If the name 'Deepfreeze' is used in any editorial manner it should be used only as a noun, and not as an adjective or a verb. . . . and should be capitalized and enclosed by single quotes."

This concern has apparently been caused by the rather general use of the terms "deepfreeze" and "deep-freezing" in articles to the press and in general magazines, to denote any type of home freezer unit.

"Brother, this was one prediction that came true with a vengeance. The GI's alone, with their distaste for dried foods, would have sounded their death knell."

### DEHYDRATED FOODS MAY DO FADEOUT

CHICAGO—Postwar prospects for dehydrated foods don't look rosy to the Agricultural Department's Bureau of Agricultural Economics, which just conducted a survey of housewives here.

"Every so often someone comes up with a mysterious gadget that will make a refrigerator or refrigerating system perform 100% better—usually in defiance of all natural laws."

### Better Business Bureau Questions Gadget Claim

ST. LOUIS—The Better Business Bureau questions claims made for the "Refrig-O-Master," the box-like device advertised for installation in a household refrigerator to increase refrigerating effect, reduce running time, retard ice and frost formation, and maintain humidity equilibrium—and thus keep the refrigerator in operation longer and without service calls.

"Refrigeration experts and scientists have informed the Bureau that some of the claims made are diametrically opposed and contrary to known laws of science," states the bureau. "A laboratory test furnished by the distributor was condemned as being meaningless because of the methods used."

"Some of the uses of plastics in refrigerators predicted here have come to pass, others may come along in the future."

### DOW SEES ADVANTAGES IN PLASTIC REFRIGERATOR— BUT AT HIGH COST

Will refrigerators be made of plastics?

Possibly, some day, and if they are, they'll probably be fabricated out of polystyrene, judging from comments of Donald L. Gibb, in charge of development for the Dow Chemical Co.

"Polystyrene has some remarkable properties," Gibb declared. "It has a very low heat conductivity. It is an ideal insulating material. It is water resistant and will not rot like cork or sweat like wood. It is impossible to chip or crack. It can be cut yet will retain its polished surfaces. It can be easily laminated with wood or metal."

A refrigerator made from polystyrene would have the inner and outer polystyrene panels pressed out and filled with polystyrene insulation batt. Doors likewise would be constructed from polystyrene. Such a refrigerator, it is said, would be sturdy, yet so light in weight that a 95-lb. housewife could move it easily.

"It's regrettable that more utilities haven't seen fit to take this advice about pushing the heat pump."

### UTILITIES TOLD TO BACK 'HEAT-PUMP' AIR CONDITIONING

NEW YORK CITY—If utilities will promote the installation of year-round air conditioning systems depending upon the "heat pump" action of the compressor to provide winter heating, electricity consumption of the average home can be greatly increased and a more efficient heating plant provided, declared Philip Sporn, vice president in charge of engineering of the American Gas and Electric Service Corp. at the recent annual meeting of Edison Electric Institute here.

Electricity consumption of the average residence would be boosted from 1,000 to 10,000 kwh. a year with such a year-round system, according to Sporn. Electric rates would be correspondingly reduced, however, he pointed out.

"Industry associations kept up with their programs for improved standards, even under wartime conditions."

### HEAT TRANSFER GROUP SEEKS NEW METHOD OF RATING EQUIPMENT

CHICAGO—By unanimous consent of the 37 representatives of 14 heat transfer manufacturers attending the Rema Spring Conference Product group meeting April 25 here, consideration of a new set of standards for the rating of heat transfer equipment used in the refrigeration industry has been agreed upon, and a five-man committee appointed by E. M. Flannery, Bush Mfg. Co., chairman of the Heat Transfer Product group of Rema, is now preparing recommendations for new methods.

"Sales managers saw the coming rush to open up dealerships, and were worrying about the possible deterioration in the quality of retailers."

## Will the Retail Appliance Field Have Too Many 'Neophytes' After the War?

**Newcomb Says That 'Boom' May Be In  
Dealers Rather Than Buyers**

CINCINNATI—Retailers' anticipations of a boom market in electrical appliances during the first years after the war may not be as long lived as now believed, members of the National Industrial Stores Association were told at the group's annual convention.

Pointing out that the immediate postwar sellers market may switch to a buyers market much more quickly than is now expected, T. J. Newcomb, sales manager of the Appliance Division of the Westinghouse Electric & Mfg. Co., said:

"I don't believe any one involved in retail selling—from the manufacturer to the Main St. Store—can 'slop' his way to lasting prosperity on the golden chariot of a postwar buying boom."

"Certain government agencies came up with some thoughts on how distribution patterns might be changed after the War—and the wholesaler-retail branch of the industry quickly took up the cudgels."

### Veteran Wholesaler Takes Apart FTC Report Praising 'Direct' Distribution

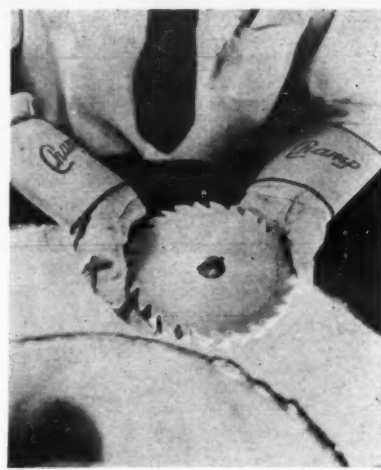
**Editors Note:** Harry Alter has been a wholesaler of appliances and appliance parts since sometime before 1920. The news story on page 1 of the March 13 issue of the News headlined "FTC Report Calls Direct to Dealer More Efficient" aroused him into writing this following reply to the FTC study.

**By Harry Alter, President, The Harry Alter Co.**

The implications of the Federal Trade Commission report to Congress about distributive costs of refrigerators in the March 13 issue of the NEWS, overlooks entirely the subject of the direct relationship of cost and volume.

Reference is made to a manufacturer who began direct sales to dealers in 1939 at reduced prices. I think I know who that manufacturer is.

But nothing is said about how this manufacturer projected a vast increase in sales over previous years based on his cutting of prices. No mention is made about when other manufacturers also reduced their prices the direct-to-dealer manufacturer failed to show further proportionate sales gains.



Metal treating with cold instead of heat was found to be faster. To meet the needs of the war old and new low-temperature equipment was pressed into service by industry.

"Food supermarkets were looking ahead to an era of pre-packaged foods and self-service on perishable items, as a move to gain more efficient food retailing."

### Chain Store Trend To Self-Service On Meats Seen

CHICAGO—Food chain stores are apparently making plans to go "all out" on self-service after the war, and the long-predicted self-service meat departments seem on their way to become a reality, it was indicated by developments at the recent annual meeting of the National Association of Food Chains.

"In fact," said one commentator, "one gathers that the ideal postwar chain grocery store will consist largely of lines of open-front refrigerators, into which eager customers will dip their hands without even having to slide open a cover."

"A new type of frozen food cabinet was due, and many manufacturers of commercial refrigerators were ready with designs of improved open-type display cases."

### Birdseye Executive Says New Type Frozen Food Cabinet Is Due

Declaring that the low temperature cabinets from which frozen foods are now dispensed in retail stores are "inefficient and costly," G. D. Mentley, vice president of BirdsEye Snider, Inc., predicted that they would be replaced by modern units that provide maximum food protection, visibility, and accessibility, in a talk made before the New York State Food Merchants Association.

"When it took ingenuity to do a task, the industry was up to it."

### Airtemp's Aluminum Cabinet Enables Army to Fly Medicine To Farthest Outposts

DAYTON — Flying across vast oceans on errands of mercy, long range transports and patrol planes carry priceless life-saving serums and vaccines as well as certain foods to far-flung theaters of war. Many vital, perishable medicines of this type must be kept under refrigeration during shipment.

For this purpose the Airtemp Div. of Chrysler Corp. has developed a compact, custom-built refrigerator for airplanes using aluminum.





During the war years Kold-Hold made a variety of products for defense. One which applied refrigeration was a testing cabinet for instruments and equipment at temperatures simulating stratospheric conditions.

"Some thought was given to the postwar refrigerator, and some thought the round refrigerator with circular shelves might make its appearance. Here are some reasons why it didn't."

## Whirling Shelves Kiddies' Delight, Says Critic of Round Refrigerator

DETROIT—The postwar household refrigerator will be bigger, but it won't be circular, declared Glenn Muffy, well known consulting engineer of Springfield, Ohio, who addressed the Detroit Section, A.S.R.E.

"There are at least four disadvantages from the user's viewpoint, in a circular cabinet," Muffy continued. "For one thing, most designs call for a center post around which the circular shelves revolve. This center post will prevent placing a large platter of food on a shelf. Besides you can't put as many round dishes on a round shelf as on a square or rectangular shelf," he pointed out. "Then, too, how does the housewife clean a circular shelf?" he asked. "It can't be removed from the refrigerator. In addition there is a tendency for tall bottles to tip over as the shelf is revolved. And one major point against the revolving circular shelf is that children will have a lot of fun making the shelves go 'round, spinning bottles and food.'"



"High interest developed in home freezers during the War set many companies to making plans for new or increased production of such units postwar."

**Only 50,000 Home Freezers Sold Prewar; 500,000 a Year Might Fail Demand Now**

Details Are Revealed on Two Makes of Home Freezers

Two exhibits of models of postwar refrigeration equipment which captured a great deal of attention at the Midsummer Furniture Mart in Chicago were those of Coolerator Corp. and Pelco (Portable Elevator Co.).

The Coolerator low temperature units consisted of one 6½ cu. ft. and one 16-cu. ft. chest-type cabinet with full-opening types. The smaller unit was equipped with a ¼-hp. Tecumseh condensing unit, and the storage compartment is divided into two sections of 2 cu. ft. and 4½ cu. ft., respectively, to permit segregation of foods put in for freezing.

"It seemed likely that some new patterns in refrigeration parts and supplies wholesalers' operations might come to light after the War, and a debate began about them."

## REMA, JOBBERS DEBATE POSTWAR CHANGES IN DISTRIBUTION POLICY

CHICAGO—In one of the most significant meetings in its history the National Refrigeration Supply Jobbers Assn.—

(1) Debated the question of whether or not a parts and supply jobber should sell "packaged" refrigeration and air conditioning equipment, with more jobbers than ever before apparently favoring the idea.

(2) Heard that manufacturers were taking heed of and acting upon the suggestions made by manufacturers relations committee of the N.R.S.J.A.

"Charlie Wilson is back in about the same job today, and still dodging brickbats."

## C. E. WILSON RESIGNS WPB POST; CHARGES 'UNFAIR' ATTACKS

WASHINGTON, D. C.—Charles E. Wilson resigned Aug. 24 as executive vice president of WPB declaring that he was stepping out because of "unfair attacks and criticisms" which he claimed were inspired by members of the personal staff of Donald M. Nelson, WPB Chief.

"All-weather laboratories which simulated sub-Arctic temperatures among other conditions, were made possible by mechanical refrigeration equipment."

## Tanks & Trucks Undergo Extreme Weather Tests in New Laboratory

By Terry Mitchell, Frick Co.

Refrigerating engineers have successfully tackled some pretty difficult jobs in the 60-odd years since mechanical cooling was introduced. It is safe to say, however, that none of these presented more problems, or was more intricate and comprehensive than the high-low temperature weather laboratory recently built for the Corps of Engineers, U. S. Army.

This job comprises not just one testing room, but three. It not only provides temperatures as low as -70° F., but furnishes air heated all the way up to 150°. The humidity of the air ranges from saturation to only 20%, which in ordinary language is bone-dry. For simulating conditions

"We don't know whether Clarence Birdseye's statement held water at that time, but it might well do so now."

## Quick-Freeze Industry One Of Nation's Biggest, Says Birdseye

CHICAGO — "America's quick-freeze food processing industry is already bigger than the country's total railroad and steel industries combined," stated Clarence Birdseye, refrigeration consultant to General Foods Corp. and a pioneer in his field, in his address to the eleventh annual commercial meetings of the Edison Electric Institute in Chicago April 5.

He backed this dramatic statement with supporting fact. Of all the foods we use, he pointed out, 75% of them need preservation through some kind of processing—canning, concentration, dehydrating, freezing.

## Postwar Kitchen Designers Are Warned to Provide Space For Home Freezer

DETROIT—Home freezer sales after the war may not reach the heights that some predict, but a great number will certainly be sold, so the home builder will "find himself in an advantageous spot" if he designs his kitchen or utility space for freezers and frozen food storage units, believes the real estate editor of the *Detroit News*.

"This answer to a question asked by the armed services may be useful to a dealer today."

## Navy Has Question—'How Many People Will an 8 x 6 Serve'

KENDALLVILLE, Ind. — How many people can be served out of an 8 by 6-ft. cooler in a restaurant per day?

That's a question which prospects for commercial refrigeration equipment sometimes ask, and when a Navy procurement officer asked it recently, McCray Refrigerator Corp. put the question to its engineering department.

"Generally speaking, one cu. ft. volume will handle one daily customer (three meals as in a restaurant). We suggest figuring a safety margin of about 30%. An 8 by 6 cooler has about 225 cu. ft. volume—225 cu. ft. less 30% equal 160 people, based on daily deliveries.



"Government officials running the home front finally became convinced, after a long campaign, that maintenance of civilian refrigeration equipment was vital to the national health and safety."

## 'Go Back to Your Job'—WMC to Servicemen

## Shortage of Refrigeration Repairmen Termed Threat to National Health

WASHINGTON, D. C.—Experienced refrigeration repair men, now working on jobs less important to the national welfare, have been requested by the War Manpower Commission to return to their former occupations.

The shortage of such workers, WMC said, presents a serious threat to national health. War conditions make proper refrigeration, always necessary, vitally important, WMC declared. Refrigeration equipment, however, is impossible to replace. Old machinery must be repaired and kept in use if the nation's food supply and the people's health are to be preserved.

"Senator Tobey of recent television fame was very conscious of the benefits of frozen storage to his constituents in 1944."

## Senators Enthusiastic Over Freezing of Foods, Push Locker Plant Expansion

Sen. Tobey Cites 'New'

Types of Benefits

Sen. Tobey: I have watched the project going along up in New England particularly in my own state of New Hampshire. It has been something most pleasing for me to observe. I have followed it with great interest. It has been a very healthy growth a steady, sound growth and it will persist.

I speak not only from observation, of course, but that includes my own immediate family. We have used that for surplus foods. I have patronized some of the products of these frozen food lockers. My experience with them, therefore, is not confined to a long range observation. It has been an experience connected with myself and my own family very intimately, and most enthusiastically and one which shows the future benefits to be derived from this plan.

*the*  
**'PENN'dulum of**  
**tubing quality**  
**moves the hands**  
**of achievement**

**COPPER TUBING SWINGS TO DEFENSE**




THE national shortage of copper is controlling tubing production, but critical shortages never affect Penn quality. Years of experience have enabled Penn to develop quality control which maintains high standards. All hands at Penn are trained to produce the finest seamless tubing—dehydrated for moisture-free installations—annealed for easy bending—clean and bright for trouble-free service. Accomplish more with less—production gains momentum when quality takes over—Penn tubing speeds installations, minimizes waste and reduces trouble. Tubing with the Penn trademark on the outside is your guarantee of 100% quality on the inside.

Modern Papco tube tools conserve tubing by making a perfect flare and cut every time. Send for informative literature today.


**QUALITY TUBING HAS A "PENN NAME"**  
**PENN BRASS & COPPER COMPANY**  
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Hinshaw Supply Co., San Francisco parts wholesaling firm, set up these island displays in its new building to remind customers of small items they might forget to ask for, as part of its "self-service" merchandising plans.

"Even the parts wholesalers got the self-service bug."

## 'Supermarket' Plan of Selling Refrigeration Supplies Highly Favored by Customers

By James H. Downs, Manager, Refrigeration Supplies, Cleveland

A brief item in the AIR CONDITIONING & REFRIGERATION NEWS was responsible for our company adopting the "supermarket" method of merchandising in our refrigeration parts and supplies store. When we finally decided to try "supermarket" selling we realized that we were on an "uncharted sea."

Our first consideration was to eliminate a sales counter which would separate the display tables from the front of the store. Instead of barring our customers from the stock room, we intended to try to induce them to wander through our store and inspect all of our merchandise. Today, our customers come to the back of

the sales counter almost as frequently as they do to the front.

We realized that certain items did not lend themselves to arrangement on a display table. These we place on shelving around the walls of the store. These were such items as seals, replacement parts, flare and sweat fittings, door seals, and pulleys. In fact, any item which requires part numbers for ready identification, does not seem suitable for table display.

But these items are still displayed, although in a different manner. Such items as require it are placed in steel stock pans, with a picture of the item and its part number on the front of the pan.

"As the war came to a close, inside stories of many military secrets were revealed to the public. The vital role that refrigeration played in many of these developments was chronicled by the NEWS."

## More Than 300 Tons of Refrigeration Capacity Installed In Plant for Big Scale Penicillin Production

NEW YORK CITY—More than 300 tons of installed refrigeration capacity are used in the manufacture of penicillin, the "wonder cure" for many dread diseases, in the new plant of Commercial Solvents Corp. at Terre Haute, Ind., reported Clifford F. Holske of the Vilter Mfg. Co. in a talk at the A.S.R.E. convention. The "deep fermentation process" used by Commercial Solvents Corp. is one which permits production of penicillin on a commercial scale.

Carefully controlled temperatures are an important factor in limiting the fermentation period to the proper time of five to six days. Refrigerated cooling water is circulated through the fermenter jackets to maintain the temperature (73° F.) required for optimum growth and yield.

"The cooling of machine tools really came of age during the war and manufacturers were more than eager to try out this new idea in their civilian production lines."

## Cooling of Cutting Oils For Machine Tools Has Peacetime Possibilities

EVANSTON, Ill.—Of the many new industrial applications of refrigeration that have been made to speed wartime production, some will be continued in peacetime when efficiency and economy of production, rather than speed alone, will become important again.

One of these developments that may be found useful in normal production is the cooling by refrigeration equipment of cutting fluids employed in machine tool operations to cool both cutting tool and stock. To date, many such systems have been installed to hold cutting oils at constant optimum temperatures for automatic screw machines.

Specialized refrigeration units designed for this particular operation have been produced by the Gray-Mills Co. here, which claims several advantages of this application of refrigeration.



"The locker plant was still in its ascendancy in 1945 and was even invading the city market."

## Locker Plant In Basement Offers Space to Chicago Apartment House Tenants

CHICAGO—Air Comfort Corp. of this city is installing refrigerated locker facilities in three more apartment houses here, after having pioneered the original installation of 32 lockers in an apartment house at 180 E. Delaware here earlier in the year.

While there has been considerable conjecture on the possibilities of this method of receiving and storing commercially packed frozen foods in the apartment house type of dwelling, it is believed that this is the first installation on any scale that has gone into operation.

"No homesick soldier exchanged khaki for multi any faster than Frigidaire converted its operation back to civilian production."

## First Frigidaire Units Produced In 7-Cu. Ft. Size

DAYTON—The first household refrigerator manufactured by the Frigidaire Division of General Motors Corp. since April 30, 1942, was completed at the Morain City plant the week of July 23.

The first Frigidaire to come off the assembly line was the Model MI-7 and it will be followed by Models DI-7 and DPI-7. All of these models have a food storage capacity of 7 cu. ft. and a shelf area of 12 sq. ft., and large frozen storage capacity.

"It sounded like a good idea at the time."

## Two Units Will Power Hotpoint Combination Job

CHICAGO—Hotpoint will manufacture a combination refrigerator freezer, with two condensing units, to be ready for distribution at approximately the same time as its conventional refrigerators and home freezer, it was announced last week.

"Selling frozen foods was a special operation in the early days. Regular food stores did not have the equipment to handle them."

## FROZEN FOOD CENTER OPENS NEW STORES IN SUBURBAN CITIES

BRONXVILLE, N. Y.—New frozen foods branch stores here and in New Rochelle, N. Y., have been opened by the Frostar Frozen Food Center of White Plains, N. Y.

The two branches will retail frozen foods exclusively, as does the White Plains store, although the latter also acts as dealer for the Deepfreeze line.

"Another postwar dream that came true."

## Self-Service Laundry Chain Will Employ Automatic Washers



Ross D. Siragusa (left), president of Admiral Corp., poses with Indiana's governor, Ralph Gales, in front of the company's new refrigerator, production of which was started late in 1945, about the first "postwar" refrigerator line to get into production.



This is the first "basement" locker plant to be installed in an apartment house in Chicago.



"Interest in home freezers was widespread and many wondered what these boxes could do. They get some advice from an expert."

## How Much Can Home Freezers Do In Freezing & Refreezing of Food?

NEW YORK CITY—An early rush to buy the smaller of the 4 and 6-cu. ft. variety, with a later trend to larger models paralleling the experience of the household refrigerator field, is the probable immediate post-war prospect for the home freezer industry, in the opinion of Donald K. Tressler, manager, General Electric Consumers Institute.

"There is no necessity for quick freezing most foods in home freezing operation," speaker averred. "Freezing at a rate comparable to that obtained in commercial sharp freezers is amply fast enough for foods packaged in small containers."

"Most persons think it is necessary to quick freeze vegetables in order to obtain a product of fair quality. This is not entirely true."

"Well before the war ended in Europe, manufacturers indicated that they were taking the war-time demand for home freezers seriously and were going to be ready when peace came."

## PHILCO PLANNING HOME FREEZER

## Harvester Co. Plans Home Freezer Line

## Brewer-Titchener Produces Home Freezer Line

## New Harderfreez Freezer Model Announced

## MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### Dr. Carrier Explains Main Features Of New Patents On 'Conduit' Conditioning

### SEEGER TO BUY SUNBEAM CO.

### Lehigh Foundries To Take Over M & E's Compressor Activity

### Westinghouse Buys B. F. Sturtevant Co.

### 'Roll-a-Door' Principle Adapted For Use on New Weber Freezers, Fountains

### TENNEY EXPANSION VALVE USES NO FEELER BULB

### Pressed Steel Plans To Make Ranges First

### WORTHINGTON PLANNING NEW COOLING LINES

### Kalamazoo Stove Plans Refrigerator, Washer

### WESTINGHOUSE DRYER MATCHES LAUNDROMAT

### Gary Leaves Navy For Henry Valve Co. Post

### Hedrick Directs Mills Distributor Sales

### Hinchcliff Joins Amana Freezer Sales Force

### Norge Adds Three New Products To Its Line

DETROIT—Three new appliances—a portable electric water cooler, home freezer, and an automatic cycle washer—are being added by Norge Division, Borg-Warner Corp.

### Peerless Producing Coils, Condensers, Expansion Valve

### Tyler Home Freezer Line Has 2 Uprights, Chest Type

### LEHIGH INTRODUCING CONDENSING UNIT LINE

### Hertzler Is Elected York Vice President

### SUPERIOR PROMOTES W. A. SIEGFRIED

### Emde, Lesley Named To Temprite Posts

### COGGIN IN DETROIT LUBRICATOR POST

### Krall Named V. P. of Tyler Fixture

### Frigidaire Appoints Peters Adv. Manager

### JOHN DUBE IS ALCO GENERAL MANAGER

### National Bureau Of Standards Issues Revised Standard For Commercial Condensing Units

### Freezers, Dishwashers Are Appliances That WACs Want Most After War

### New Freezer Hardware Made by National Lock

### CRAIG HEADS CROSLY PLANT IN RICHMOND

### Detroit Lubricator Ups Doucet, Thorndike

### Dealers Express Renewed Interest In Selling Counter Freezers Postwar

### Aulsebrook To Head Servel Sales Division





"Big companies did a lot of studying before they sunk their cash into this new method of merchandising produce."

## Packaged Produce Kept Under Cooling Preferred by Shoppers, Test Shows

COLUMBUS, Ohio—The A & P Food Stores chain has made its first report on its experiments here in merchandising packaged fresh fruits and vegetables through mechanically refrigerated "self-serve" type of store fixtures, and the reports indicate that the experiment was highly successful from all standpoints.

In its report A & P said that "the two-fold possibility of providing consumers with farm-fresh produce throughout the year and substantially reducing the nation's estimated 25% waste and spoilage of fresh fruits and vegetables is indicated after two years of a college-industry experiment."

"Their crystal ball was flashing the green light and they found themselves a step ahead of the frozen food case manufacturers."

## Packaging Firms Preparing For Era of 'Self-Service' Frozen Foods Retailing

NEW YORK CITY—The trend toward self-service in food stores will bring marked changes in the packaging and display of frozen foods, said M. C. Pollack, promotion manager of the Cellophane Div., E. I. du Pont de Nemours & Co., recently.



"This front page editorial expressed the worries of many soldiers who had had to abandon their businesses or step off the promotion escalator to serve their country. Some, on their return, found that their worries were justified."

## Are the G.I.'s Overlooked?

HARRY A. PHILLIPS, Jr., U. S. N. R., has written us a highly intelligent and most thought-provocative letter. This communication was published on page 10 of the Jan. 15 issue of the News.

Mr. Phillips wonders what "refrigeration manufacturers are doing along the line of planning for placing the returning veterans at something besides pushing a broom or working on an assembly line."

"I have gathered the impression that the manufacturers are at the present time placing all of their franchises and filling all the big positions in their organization for postwar. . . .

"My personal observations of the amount of clear thinking, study, and planning by a large percentage of (servicemen) who are honestly trying to fit themselves for the postwar period are that these fellows—would be a credit to any organization.

"The question is: Are they working, planning, and dreaming in vain? Are they being sold down the river by the very people they are fighting to protect?"

We believe it incumbent upon each corporate entity in the industry to write former employees, and former customers, assuring them that when they return from their lethal and frightful jobs a place in our industry will be waiting for them!

"In the years following the war, this plaint was heard over and over again."

## 'We'll Have to Treat 'Em Better, If Veterans Are To Sell Appliances,' Says Sam Vining

BOSTON—Salesmen for years have been the most casually treated links in the production chain, Sam Vining of Westinghouse Electric Corp. told members of the Electric Institute of Boston, Inc.

"We ask for references and experience when we're looking for a bookkeeper or a repairman," he said, "but we used to give a fling at sell-

ing to the first man in a clean shirt that came along."

The name "salesman" is a word with a bad smell, Vining said, and surveys show that the number of veterans interested in a selling job isn't enough to reach pre-war levels, much less measure up to the postwar selling assignment.

"This, naturally, was before inflation got its hooks into our money."

## Air Conditioning Will Be Practical For \$6,000 Homes, Builders Told

"This idea caught on like wildfire and paced the frozen food industry in the amazing growth it has experienced in the last six years. . . . Predictions of that growth sounded fantastic then, but they paled before actual results."

## NEW METHOD IMPROVES FROZEN ORANGE JUICE

NEW YORK CITY—Tins holding six ounces of condensed, quick-frozen orange juice are being sold by Carl E. Seaburgh, head of three Westchester County shops—the Frostar Frozen Food Centers.

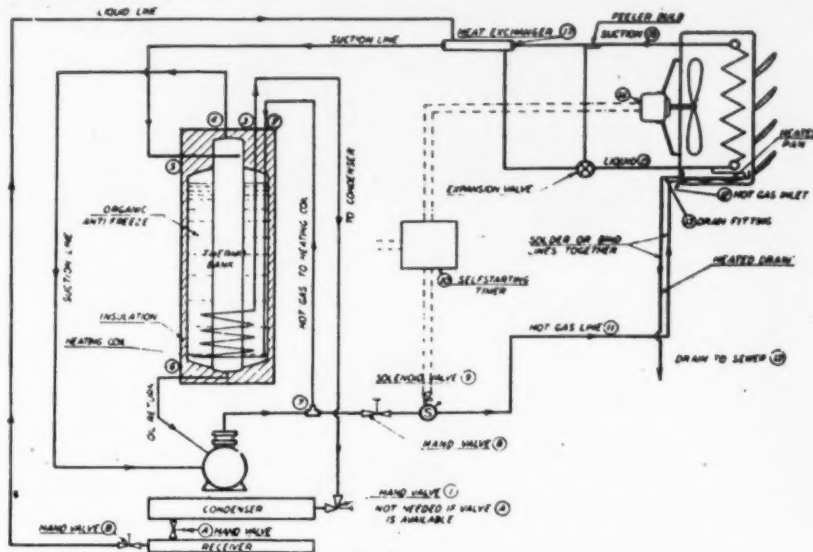
When mixed with the right proportions of water, the six ounces provide 24 ounces of ordinary juice. On the basis of the present cost—45 cents for a tin of the concentrate—a four ounce serving comes to about 7½ cents.

The process followed in condensing and freezing is one worked out by the Florida Citrus Commission.

## Greatest Postwar Gain In Frozen Foods Will Be In Retail Stores

NEW YORK CITY—"There is every reason to expect a 300% to 400% increase in production of frozen foods in the next five years," declared George W. Meek, president of Frozen Food Products, Inc. in a talk before the Council of the American Society of Consulting Engineers here recently.

Pointing out the advantages of frozen foods, Meek described the basic methods of distributing frozen foods.



"Automatic defrosting is a problem that received considerable attention from refrigeration engineers right after the war and is still developing rapidly."

## 'Hot Gas' Heat Is Stored for Automatic Defrost in System Developed by Kramer

TRENTON, N. J.—Introduction of a completely automatic defrosting method for refrigerating systems operating at below-freezing temperatures has been announced by the Kramer-Trenton Co., here.

This defrosting method involves the use of the company's "Thermobank" which is a heat exchanger combined with an antifreeze solution to store heat.

The inner tank of the Thermobank is connected to the low side of the refrigerating system. Surrounding the inner tank is a hermetically sealed outside tank permanently filled with an antifreeze solution.

"A new element of the industry clamors for recognition."

## CONTRACTORS FORM NATIONAL ASSOCIATION

CHICAGO—"Resolved: That the National Association of Refrigeration Contractors hereby is formed. . . ."

This, the opening sentence of NARC's first official document, was written in Chicago early in December to establish the beginning of a new organization in the refrigeration industry.

At the ripe old age of 42, Typhoon would like to give a pat on the back to  
AIR CONDITIONING  
& REFRIGERATION NEWS  
—an up and coming youngster of 25.  
We've come a long way together!

You have given a needed voice to the industry  
... and we have pioneered in developing air conditioners from the first crude Typhoon fan to the streamlined, low-purring, self-contained unit of today.  
Here's looking forward to the best years of our lives  
... which are still ahead of us both!

Nice Going, Sonny!



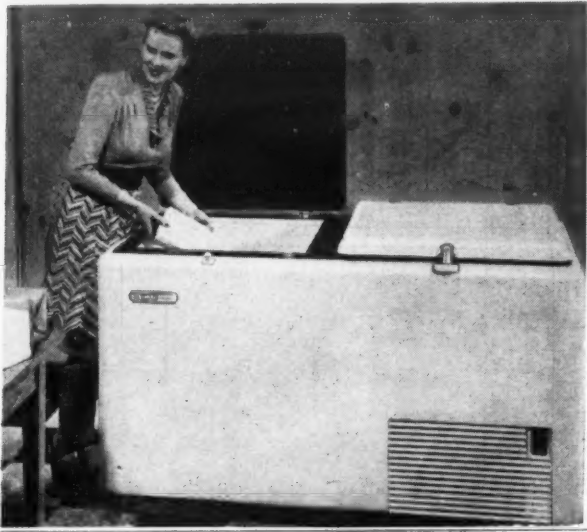
America's No. 1 Specialists in Packaged Air Conditioners



1909 1951  
Self-Contained Units:  
1½-2-3-5-8-10-15-20 Tons  
Evaporative Condensers:  
3-5-8-10-15-20 Tons

**TYPHOON**  
AIR CONDITIONING CO. INC.  
794 UNION STREET, BROOKLYN 15, N. Y.





New factor in the freezer field, Ben Hur joined other manufacturers in bringing out its line of home freezers.



"Government planners, in their all-seeing wisdom, are everlastingly making things tough for the little fellow. And the NEWS has never failed to sound the alarm."

## Attention: Mr. Appliance Dealer

If You Want To Stay In Business—Write Your Senators Today! AMAZINGLY, few appliance dealers seem to realize that an OPA policy may put them out of business this year.

Having hopefully looked forward to a proper resumption of appliance merchandising for so long, they simply can't make themselves believe that a government edict—which most of them have overlooked—will force them to lose money until they will have to quit the business.

Mr. Average Appliance Dealer: this means YOU.

What is this edict? It's the OPA policy of forcing all wholesalers and retailers to "absorb" price increases granted to desperately needy manufacturers.

It is the OPA's belief that there is some "water" in distribution costs. This "water" is supposed to "absorb" admittedly higher manufacturing costs, so that retail prices to consumers won't have to go up.

"Calculating cooling loads was a job for a trained engineer but this device made it possible for a non-engineer salesman to do the job."

## ACRMA WILL PROVIDE SIMPLE LOAD CALCULATOR

WASHINGTON, D. C.—Salesmen "measuring" a store, restaurant, or office for self-contained air conditioners made by Air Conditioning & Refrigeration Machinery Association members no longer need to make involved computations to arrive at the right answer.

The Cooling Load Estimate Form, recently copyrighted by the Air Conditioning & Refrigeration Machinery Association, lists all the factors to be considered.

"Right after the war everybody and his brother wanted a franchise to sell appliances, it seemed. And if he couldn't get a franchise, he managed to get the appliances anyway."

## 1 Dealer Per 435 Homes: More Than Twice Pre-War Figure, Kelley Speech Emphasizes

ATLANTA—Threat of a "high mortality rate" among retail appliance dealers when the transitions from a sellers' to a buyers' market occurs was depicted by H. M. Kelley, Frigidaire sales manager, before the Southeastern Electric Exchange sales conference.

Kelley cited recent surveys showing that there is one major appliance dealer for every 435 homes in the nation, compared with a pre-war average of about one such dealer for every 1,000 wired homes.



"The question of 'what is a wholesaler' has been hotly debated for years. This statement of policy should have put an end to it, but how many wholesalers does this definition fit today?"

## R.E.W.A. Issues 'Statement of Policy' To Guide Business Conduct of Parts Wholesalers.

CHICAGO—A formal "statement of policy" was adopted at the annual meeting here of the Refrigeration Equipment Wholesalers Association, and this policy will guide the member parts and supplies wholesalers in their trade relationships.

This statement of policy by R.E.W.A. has two main parts (1) the definition of a supplies wholesaler, and (2) the approved business policy for members.

The term "Refrigeration Equipment Wholesaler" is defined to mean a person, firm, or corporation:

1. Whose major activity in refrigeration is the sale of new refrigeration and air conditioning equipment,

parts, and supplies at wholesale to the trade as defined in Point No. 7.

2. Who does not sell at retail.

2. (a) Who does not sell refrigeration merchandise of any description, through his own appointed franchised or exclusive dealers.

3. Who does not perform installation or service except as noted in No. 4.

4. Who may, however, perform shop repair work at wholesale to the trade only as defined in No. 7.

7. The term "trade" is defined to include the following: Service Men, Dealers, Machine Distributors, Contractors, Ice Cream Manufacturers, and other recognized trade outlets.

"The wine industry—like others—was learning that refrigeration could help increase production and do it profitably."

## 'Replacing Age With Refrigeration' Enables Winery To Get Top Prices

FRESNO, Calif.—Baker Ice Machine Co. and Cyclops refrigeration equipment recently installed in the Fresno Winery here has enabled the company to ship one million gallons of wine to market many months ahead of the normal delivery date.

"We are using our two new refrigerating installations to speed up the time required to convert 'new' wine into 'finished' wine," Dale Mills, bacteriologist and manager of the winery, explained. "Normally, finished wines are those which have been aged, stabilized, clarified, and otherwise handled until they reach a point where they will remain sparkling and brilliant under any kind of shipping or display condition."

"Formerly, it required anywhere from 20 months to three years before certain wines achieve this ideal situation—it requiring that long to precipitate out the colloids and tartrates which prevent stabilization. However, we have discovered that cold, properly applied will reduce this period to an absolute minimum."

"That word 'interstate commerce' had plenty of rubber in it and NLRB examiners really stretched it."

## CONTRACTOR WILL TEST WAGE-HOUR CASE IN COURTS

DETROIT—An all-important court case whose outcome may affect most refrigeration contractors is in prospect here, following a U. S. Government decision last week that the employees of a leading Detroit contractor are "covered" by the so-called "Wages and Hours" law.

In a move apparently instigated by employees of the contractor who are members of the Steamfitters union, the Detroit branch of the U. S. Department of Labor's Wage and Hour and Public Contracts Divisions has decided that virtually all the employees are subject to the Fair Labor Standards Act of 1938.

Briefly, this act sets up a minimum wage of 40 cents an hour and provides that all work performed after 40 hours in a week be paid time-and-a-half for employees engaged in interstate commerce.

"Big things were planned for frozen foods in 1946, but many of the plans foundered on the rock of poor quality product in 1947."

## The 'Frostmaster' Plan

### Dep't Store Frozen Food Merchandising Charted by Syracuse Pilot Operation

SYRACUSE, N. Y.—Under the "Frostmaster" plan for integrated department store frozen food merchandising, tested in this city since July, 1944, sales of frozen foods are averaging more than \$200 a family a year—compared to a national average of \$5-\$6—and charge accounts are averaging twice normal.

This and other evidence was presented at the first annual meeting of the Frozen Food Foundation, Inc., held here March 28-30, to support the proposal that the "Frostmaster" plan is "a ticket back to a field in which the department stores were once important factors: the distribution of food to the American home."

"Packaged air conditioning units were being turned to more and more to solve tricky problems in large installations."

## Variable Heat Loads In Hotel's Assembly Rooms Controlled By 9 Airtemp Units

HARRISBURG, Pa.—Highly successful results from the use of nine Chrysler Airtemp "packaged" air conditioners to provide flexible control of the widely varying heat loads on the parlor floor of the Hotel Penn Harris are reported by Franklin Moore, president of the hotel.

For air conditioning meeting rooms and main corridors of this floor, one 5-hp. and eight 3-hp. Chrysler Airtemp "packaged" air conditioners—each an individual system—were installed in 1940.

The 3-hp. units are recessed in unused spaces between the rooms. Access is provided through special doors opening from the meeting rooms. Special thermostats are mounted on panels outside the meeting rooms so that the resident engineer can make necessary adjustments in the setting of the thermostats without disturbing the occupants of the rooms.

"The West Coast led the way in the phenomenal growth of 'super' supermarkets and still hasn't answered completely the question 'How super can you get?'"

## 10 New 'Super' Super Markets On Coast to be Built Around Refrigeration Units

### Refrigerated Tables Will Permit Open and Accessible Display For Frozen Foods

SAN FRANCISCO—Construction of 10 new "super" super markets built around \$800,000 worth of refrigerating units will be started here immediately by Lucky Stores, Inc., announces Charles Crouch, president of the West Coast super market chain.

In the "super" super markets, he continued, frozen foods will be much more accessible. They will be piled atop refrigerated tables which will keep frozen foods at -17° F. at table surface and -2° F. at the top of the pile. Temperature of the table tops will be so regulated he added, that fresh foods such as lettuce and cottage cheese can be chilled.

"Our boys in blue are probably wondering how these experiments ever came out."

## Navy Experiments Point to Plan for Air Conditioning Of Entire Fleet

WASHINGTON, D. C.—There's a new Navy secret weapon in the wind. It's air conditioning. The Admirals have decided an air-cooled fleet might well prove a more efficient fighting unit.



## 20 years of serving the refrigeration industry

A big part of the 25 years that AC&RN has been reporting the progress of the refrigeration industry, Kold-Hold products have been presented on these pages. Like AC&RN, Kold-Hold has grown with the industry . . . until today it occupies one of the best-equipped and most complete plants in the business.

Today, city folks can have a farmers' diet thanks to Kold-Hold dependable refrigeration. You don't have to live on a farm any more to get farm-fresh fruits, vegetables, meats and milk products. The growing use of Kold-Hold refrigeration plates has helped to prevent loss of the goodness and tastiness of these products between the farm and the consumer's table as in yesteryears.

Today, Kold-Hold "Hold-Over" truck plates keep truck interior at steady low temperatures to take perishable foods to market in a blanket of cold . . . for as little as 10c a day.

Kold-Hold "Serpentine" Plates provide the extra cooling area and extremely fast pull down needed for processing, and storage. At the retail level, and for the home, Kold-Hold refrigeration plates in the display cases and cabinets of numerous manufacturers, provide the last link in this vital protective chain that means better eating for all.

Refrigeration for food is health for our nation and Kold-Hold protects every step of the way—in processing—in storage—in transportation.

**KOLD-HOLD**

protects every step of the way



KOLD-HOLD MANUFACTURING COMPANY, 500 E. Hazel St., Lansing 4, Michigan





Typical of the trend toward larger, more attractive frozen foods section was this 50-ft. long frozen foods section using Tyler open top cabinets.



"Some firms took advantage of this government aid to rehabilitate returning G-I's in more ways than one, as was later brought to light."

## Planning To Train Veterans 'On the Job'? Then Here's What You Ought To Know

**Editor's Note:** "How do I go about getting approval to train veterans 'on the job'?" "How much do I have to pay them?" "Do I have to sign a contract?" "Can a veteran be fired?"

Answers by Veterans Administration officials to these and other questions currently being discussed by employers and industry associations are passed on to readers in two articles. The first, presented herewith, explains the training program authorized by the G. I. Bill of Rights. The concluding article will describe the workings of Public Law No. 16, which pertains to the vocational rehabilitation of disabled veterans.

"Some new factors were entering into the air conditioning industry that attempted to solve some of the problems that arose in the field."

## What Role Should Activated Carbon Play In the Modern Air Conditioning System?

### 'Air Recovery' Units Can Effect Substantial Savings Under Some Conditions, It Is Claimed

"Store planning was just the first step in raising the sights of the commercial fixture dealer to the bigger job that had to be done over and above selling a few cases. It started off some dealers into whole new fields of endeavor."

## Distributor Uses Store-Planning Service To Push Sale of Complete Commercial Line

DETROIT—"We don't sell a man a display case; we sell him a way of doing business."

That is a brief summation of the way Detroit Refrigerator Mfg. Co. operates here as a commercial refrigeration distributor (handling the Hussmann line) and fixture supply house, according to Lee Hayes, secretary and general manager of the firm.

Concentrating on super-markets the firm is prepared to handle the complete job of equipping a store—from a large custom-built walk-in cooler down to a small island display rack. But possibly more important is the firm's ability to lay out a design for a super-market calculated to make the most efficient food-merchandising use of a specified building or area, believes Mr. Hayes.



"A great deal of name-calling rent the air in 1946 over this 'mystery.' But everything worked out all right in the end."

## A New Mystery Serial Drama Entitled 'Freon, Freon, Who's Got the Freon?'

DETROIT—That great mystery serial drama "Freon, Freon, Who's Got the Freon," which has been enthraling the refrigeration industry for the past several months, looked last week as though it might run on for a little while yet before the final act, containing the solution to the mystery, comes off.

The elements of the mystery are relatively simple.

National Association of Refrigeration Contractors has been protesting that refrigeration and air conditioning contractors and servicing firms simply can't get "Freon-12" in quan-

ties anywhere sufficient for their needs.

Kinetic Chemicals, Inc., producer of the refrigerant, cites figures to show that it has been producing "Freon-12" at top capacity in quantities sufficient to meet the needs in the field, and company officials don't know why it shouldn't be available unless there is some large-scale hoarding going on.

Officials of Kinetic Chemicals say that the nature of their distribution system makes it impossible to keep track of the "Freon" which they ship.



"The mushroom growth of small, independent tool and die shops opened up a new market for enterprising contractors with industrial know-how."

## Building Coolers for Machine Tools Is Profitable 'Sideline' for Contractor

DETROIT—Production of refrigeration units for cooling the oil employed as a coolant in industrial machining and finishing operations has developed into a sizable business for Mechanical Heat & Cold, Inc., refrigeration and air conditioning contractor here.

An important customer for the refrigeration units is Micromatic Hone Corp. here, which manufactures automatic and semi-automatic honing machines for industry designed to finish surfaces to within a tolerance of .0003 in., which is extremely close work for quantity production.

Refrigeration plays an important role in helping maintain these close tolerance operations, and is also credited by engineers of Micromatic Hone with giving a longer life to the abrasive "sticks" which perform the actual honing operation.

"That was some show—exceeded even such glowing expectations as these. And who can forget the mad scramble for rooms at the over-booked hotels?"

## Many New Products To Be Seen at All-Industry Show

CLEVELAND—Members of "the world's fastest growing industry"—the refrigeration and air conditioning field—will pour into the Cleveland Public Auditorium by the thousands this week to see the All-Industry Refrigeration and Air Conditioning Exposition which opens Tuesday, Oct. 29 and continues through Friday, Nov. 1.

The first exhibition of such products since January, 1941, the Show promises some real "wallops" in the form of new products, new companies, and new ideas in the commercial refrigeration, air conditioning, and frozen food fields. Several manufacturers have held back new items to "spring them" at the Show. Well over 200 firms will have exhibits, making it by far the biggest.

"This looked like an up and coming business and everybody wanted to get in the act."

## CONTRACTORS HIT 'MUSCLING IN' BY OUTSIDERS

CLEVELAND—A warning that refrigeration contractors need to take immediate action to counteract the inroads on their business by contracting firms in related fields was sounded at a meeting of the board of directors of the National Association of Refrigeration Contractors.

"Reports to the association from many sections of the country indicate that contractors in related fields, who for the most part have had no share in the development of the refrigeration and air conditioning business, are 'muscling in' by using the experienced labor trained over a period of years by refrigeration contractors," N.A.R.C. directors asserted.

## National Association Is Incorporated by Contractors

CLEVELAND—Formal organization of the National Association of Refrigeration Contractors was completed at a meeting Jan. 21 and 22 here. Attending the two-day meeting were refrigeration contractors from 38 states, representing more than 1,000 firms and individuals in this important segment of the industry.

"Another obstacle to the opening up of air conditioning applications was removed in 1946."

## 'Auditorium' Air Conditioning Patents Now Belong to Public

WASHINGTON, D. C.—A final decree dedicating to the public the "Auditorium" air conditioning patents was entered Dec. 30, according to Attorney General Tom C. Clark. Auditorium Conditioning Corp. owned or controlled a large number of patents pertaining to air conditioning and cooling systems, these patents being popularly known as the "by-pass" patents relating to a system or method of treating air to obtain the desired conditions.



Postwar "dream item" was this "table level" refrigerator, which never became a reality. Below the refrigerator compartment was to be a low-temperature area.

"Established outlets haven't faded away, and Joe is still selling to servicemen and small contractors. Not only fixtures but air conditioning equipment, too."

## Parts Wholesaler's Plan To Sell Fixtures Through Service Men Arouses Dealers

DETROIT—Is the pattern of distribution in the commercial refrigeration field changing to the extent that established outlets for fixtures will fade from the picture? Commercial dealers here are concerned because J. M. Oberc, Inc., a leading wholesaler of parts and supplies, is preparing to wholesale commercial equipment to refrigeration service men.

Some of the established dealers fear that such service men may offer a terrific discount on fixture sales just to keep the service business.

The fact that several changes may be occurring in the whole field of commercial refrigeration, including distribution of fixtures, sales of parts and supplies, and the service end of the business was brought out when Oberc came down to a meeting of the Food Equipment Dealers Association of Detroit last Tuesday night at the latter's invitation and laid his cards on the table in a straight-from-the-shoulder discussion.

"To all of you," Oberc said in opening the discussion, "I give thanks, for I and my organization would never have been possible without your help. However, I've seen an awful lot of water go over the dam in the past few years. Conditions change. And I must adapt myself to my customers' needs."

"We must sell—and the only thing I sell is service. By that I mean having on hand what you want, and not at hold-up prices."

"The contractors lashed out at a traditional 'enemy' and learned a thing or two about what they could and could not do themselves."

## Coast Contractors File Formal Complaint Against Dairy Firms

SAN FRANCISCO—A sweeping Federal probe of the alleged widespread invasion of the refrigeration field by the dairy and ice cream industries has been demanded in a formal complaint to the Federal Trade Commission, it has been learned exclusively by AIR CONDITIONING & REFRIGERATION NEWS.

The detailed petition which contained more than a dozen specific instances of what it termed "vicious" and "unfair" trade practices, was filed here and at Washington, D. C., Sept. 12 by Zed E. Jones, secretary-manager of the Refrigeration Contractors Association of Northern California.

The dairies and ice cream companies are specifically charged with giving away refrigeration equipment, selling it at cost and performing cost-free service on customer-owned equipment in order to secure the customer's dairy products business. This condition, states the petition, has "resulted in intense competition" between dairies "with general refrigeration equipment often being the determining factor in securing the business."

## MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### Trend To Forced-Air Units May Standardize Commercial Low Side Coils, Boling Says

#### International Harvester Schedules Freezers First In Former Republic Plant

#### FEDDERS-QUIGAN TO MAKE UNIT AIR CONDITIONERS

#### FIRM CHANGES NAME TO SEEGER REFRIGERATOR CO.

#### Ebco Introduces New Oasis Water Cooler

#### HEAT-X-CHANGER PRODUCES CAST ALUMINUM LOWSIDE

#### Harvester Gets New 11 cu. ft. Freezer Into Production

#### York Institute To Offer Broad Training Setup

#### Norberg Heads Crosley Appliance Engineering

#### JACKEL HEADS SALES FOR TYLER FIXTURE

#### Trane Has 'Custom-Air' System, New Chiller, and Compressor

#### REMA MEMBERSHIP EXCEEDS 100 FIRMS

#### G-E's Wilson Tells How Price Control Strangles

#### DONALD FRENCH HEADS CARRIER ENGINEERING

#### One G-E Refrigerator To Have Two Doors

#### Laube New President Of Remington Corp.

#### Facilities Expanded For Production of Par Condensing Units

#### Hedrick To Manage Mills Refrigeration Div.

#### Sherer-Gillett Elects Bower Vice Pres.

#### Bynum, Gazelle and Spriggs Promoted by Carrier Corp.

#### Nance, Hotpoint VP, Plans \$17 Million Expansion Program

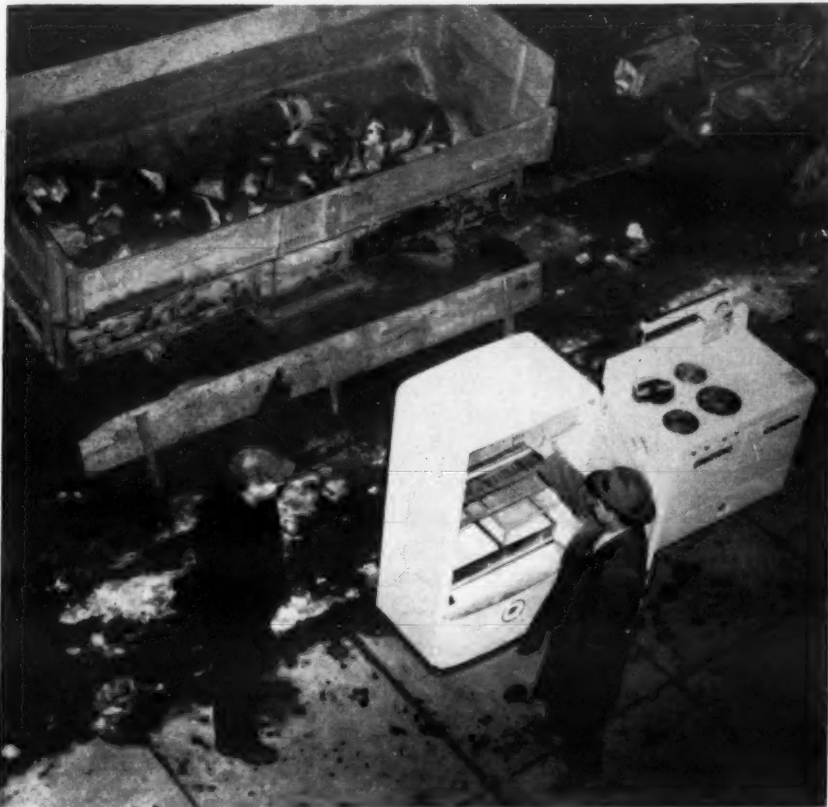
#### Schnacke Buys Rights to Servel 'Big Unit' Line

**STERN'S**  
SCARCE MERCHANDISE TIMETABLE

ELECTRIC REFRIGERATORS	TEMPORILY SOLD OUT
RADIOS- <b>PHONOGRAPHS</b>	ON SALE NOW
ELECTRIC WASHERS	TEMPORILY SOLD OUT
ELECTRIC IRONERS	ON SALE NOW
VACUUM CLEANERS	ON SALE NOW
TIRES & TUBES	TEMPORILY SOLD OUT
GAS RANGES	TEMPORILY SOLD OUT
RUGS & BROADLOOM	ON SALE NOW
DEEP FREEZE UNITS	TEMPORILY SOLD OUT

Maybe this day will return again when dealers just listed what was available and the people rushed in to buy it.





Fourteen hogs, averaging 220 lbs. per head, brought farmer Merle Otis a refrigerator, electric range, automatic toaster, and \$20 in change from Forest City, Iowa dealer John Hanson in 1947. Hanson had tagged all his appliances in "hog-pounds" instead of dollars to show farmer-prospects the relationship between appliance prices and farm produce prices.



"Tests and practical experience were helping to sell the idea of merchandising pre-packaged meats in open-type display cases."

## Tests Show Prepackaged Meats Will Last 1-7 Days In Open-Type Self-Serve Cases

POMONA, Calif.—Before going into extensive sales of prepackaged meats in open-type refrigerated self-service cases, the Valley Village Supermarket chain here has run exhaustive tests on this type of selling. Six months were spent in developing attractive packaging, choosing the most effective type of open refrigerators, and most important, testing the "Shelf life" of various types

of fresh meat on a self-service basis. Now prepackaging 90% of its meats to be sold through Hussmann-Ligonier open-type refrigerated cases, the Valley Village tests have proven that the length of time which meats will remain in attractive, salable condition at temperatures found in open refrigerators varies from one to seven days.

"Well, why shouldn't city buses be air conditioned?"

## First Year-Round Air Conditioned City Buses Equipped With 5-Ton Units, 16 Hp. Motors



"New developments in electronics were used to improve the operation of a defrosting system."

### Automatic Water Defrosting System Is Operated by Electronic Control

HARTFORD, Conn.—Electronic control for water defrost systems has been introduced by Bush Mfg. Co., manufacturer of heat transfer equipment here.

An electronic tube automatically starts the defrosting cycle whenever the current load on the motor of the blower unit fan rises to a point indicating too much frost on the coil, the company says.

### BRAZING PROCESS SEALS KOLD-HOLD PLATES

### Ace Cabinet Acquires Plant In New Bedford, Mass.

SAN ANTONIO, Tex.—The first year-round air conditioned city bus in the world was put into service on the streets of San Antonio on April 1, the San Antonio Transit Co. has announced.

"Matter of what craft union was to handle installation of refrigeration and air conditioning equipment is a knotty one, and the contractors' group went to work on it."

### United Association to Recognize N.A.R.C. as An Employers' Group

"Another new industry organization was established in the refrigerator fixture field."

### NEW NCRSA CODE HITS KICK-BACKS, SALESMAN PIRACY

### VICTOR PRODUCTS OFFERS NEW COMMERCIAL LINE



Harold Berghauer of Arctic Refrigeration Service Co., Milwaukee, was able to make 10 service calls in a 9-hour day by using the postwar-developed mobile telephone in his car. A light on the attachment under the dashboard flashes when Berghauer receives an incoming call.



"Experiments continued with one of the industry's most intriguing developments—the heat pump."

## 200-Ft. Well Supplies Heat From Earth for Homes In Muncie Reverse Cycle Unit

MUNCIE, Ind.—By using the heat of the earth as a source of thermal energy to heat the home, Muncie Gear Works, Inc. here has developed what it claims is a new type of heating system.

Known as Marvair, the system utilizes a water pipe heat exchanger sunk more than 200 ft. into the ground to transfer the earth's natural warmth to a house by means of a reverse cycle refrigeration system which heats the house in winter and cools it in summer, according to the company.

Marvair works something like this: A heat exchanger, consisting of a vertical U tube pipe 1 in. in diameter, is sunk into a well having a minimum bore of 4 or 5 in. and an average depth of 200 ft. below the natural water level.

In the Marvair system, cold water pumped through the heat exchanger travels down into the earth through galvanized pipe and returns, warmed, to the surface in aluminum pipe. The aluminum pipe is selected for its better heat transfer characteristics according to Muncie.

## Worthington Contracts for Big Heat Pump Job

HARRISON, N. J.—Worthington Pump & Machinery Corp. has been awarded a contract to supply refrigeration equipment to heat and cool—with a reverse cycle system—the new building for the Portland Oregonian newspaper at Portland, Oregon.

In terms of installed nominal tonnage capacity, two 275-ton Worthington refrigerating compressors with 250-hp. motors, this will be the largest "heat pump" installation in the country.

## Heat Pump Energy Cost Put at \$160 A Year for Indiana Test Unit

### 2-Year Operation of Ground-to-Air Machine In Residence Analyzed by Utility Official



"As new applications at hitherto unused temperatures were discovered, it was necessary to develop new equipment and components for the job."

## New 'Freons' Designed for Low Temp Jobs; Tips Given on General Use of Refrigerants

MONTREAL, Que., Can.—Two new refrigerants have been developed by Kinetic Chemicals, Inc. They are "Freon-13" which boils at -155° F., and "Freon-14" which boils at -198° F.

To back up his contention before the House Ways and Means Committee that appliance excise taxes should be eliminated or applied equitably, C. T. Lawson, vice president of Nash-Kelvinator Corp. and chairman of N.E.M.A.'s Excise Tax Committee, revealed valuable market data. Some were published last week; here are more.



"That bubbling-over enthusiasm which living on the West Coast seems to generate put over the first Western Refrigeration Exposition with a bang."

### 3,600 ATTEND FIRST WESTERN INDUSTRY SHOW

LONG BEACH, Calif.—With 3,600 registered visitors, the first Western Refrigeration Industry Exposition exceeded all expectations of its sponsors, the California Association of the Refrigeration Service Engineers Society.

## Where Does the Refrigerator Market Lie?

Before the War Most of the New and Replacement Refrigerators Were Bought by Lower Income Families

Tabulated from APPENDIX H and I

	National Brands	Mail Order	Replacement Sales
Unskilled, Semi-skilled, and Skilled Labor	43.2%	49.8%	32.2%
Clerical Workers, Salesmen	17.6%	17.4%	15.8%
Small Storekeepers, Store Managers, etc.	18.8%	18.9%	24.0%
Executives, Professional, etc.	15.4%	10.7%	22.9%
Other Purchasers	5.0%	3.2%	5.1%

### Number of Weekly Paychecks to Buy a Refrigerator

	1926	1931	1936	1941	1946	1947
Weeks Work	15.1	11.7	7.3	5.0	4.5	4.6
Weekly Earnings	\$26.00	\$22.02	\$22.60	\$31.08	\$42.67 <sup>1</sup>	\$45.41 <sup>2</sup>
Refrigerator Price	\$390.00	\$258.00	\$164.00	\$155.00	\$190.75 <sup>3</sup>	\$210.00 <sup>4</sup>

<sup>1</sup>March, 1946. <sup>2</sup>September, 1946. <sup>3</sup>Estimated September, 1946. <sup>4</sup>January, 1947.



"The home freezer industry was shaking down from a promoter's rush to a responsible industry."

## The Chickens Come Home To Roost

The honeymoon is over for the home freezer business. From all around the country the NEWS is receiving reports of dissatisfied dealers, dissatisfied customers, and frightened small-time manufacturers. It seems that people are getting choosy. They are no longer eager to buy a no-name cabinet at a high price and wait for delivery of the condensing unit later.

This was to be expected—and, in fact, has been predicted. Nearly every veteran of the refrigeration business has been waiting around for the washout and the suicide of those fly-by-nights who had no honest right to horn in on an essentially sound development.

Few home appliances have been so ballyhooed, and so widely acclaimed in advance of their appearance, as has been the home freezer. Theoretically, the coming revolution in perishable food distribution, which quick-freezing fosters, is inevitable. It is an economic imperative. Actually, however, that revolution will be slow in coming. It must take its time. . . .

You can't build a good low-temperature cabinet if you or your engineering staff—lacking a long, expansive background in the refrigeration business—are in a hurry to turn out a piece-meal product that may not do the job it has advertised. All you'll do, if you are one of those impatient fabricators, is succeed in muddying the waters for integrity-conscious manufacturers of a truly worthy product.



"It was inevitable that some kind of a 'black marketing' attempt would be made on 'Freon' and this was the ill-fated attempt to sell some surplus 'bug-bomb' chemicals."

## BIG SUPPLY OF 'FREON' OFFERED IN WASHINGTON

WASHINGTON, D. C.—"Freon-12" may be so scarce that in some sections of the country refrigeration industry groups are calling upon their state governors to take action, but there's a firm here in the nation's capital that will sell you all you want of it—if you will pay the price.

Through this advertisement which appeared in a recent Sunday edition of the New York Times, scarce "Freon-12" refrigerant to the tune of 750,000 lbs. is being offered to the industry. Nobody seems to know its source.

### Here's the Ad!

## FREON

AVAILABLE FOR LARGE QUANTITY USERS AND EXPORTERS  
Y7257 Times

"This was an important tax exemption for the air conditioning industry."

## EXCISE DROPPED FROM SOME AIR CONDITIONERS

WASHINGTON, D. C.—Excise taxes have been dropped on those store and office air conditioners which require ductwork, water connections, or special electrical connections.

Up to now, a 10% excise tax has been placed on manufacturers' sales of air conditioners under Section 3405(c) of the Internal Revenue Code, as revised in 1941. Section 3405 covers refrigerators, beverage coolers, and the like, refrigerating apparatus, air conditioners, and refrigeration components, while paragraph (c) simply lists "self-contained air-conditioning units."





Refrigerated self-service meat cases were approved by the Los Angeles City Health Department in 1947. Dr. Martin D. Baum, city director of meat and milk inspection, here approves the wrapping and labeling of individual meat cuts in an open-type Weber case.



"Some efforts to put frozen food cabinets out on a direct-to-user basis put the by-passed dealers and contractors on the warpath."

### DISTRIBUTOR OF FROZEN FOOD RENTS OUT CASES TO GROCERY STORES

PITTSBURGH—B. F. Keenan, sales manager of Milrose Sales Co., here, a frozen food distributor, has inaugurated a cabinet rental plan of frozen food cases for retail stores.

"Thus ended the long patent litigation involving the principle of the two-temperature refrigerator."

### APPEALS COURT RULES POTTER PATENTS INVALID

CHICAGO—Holding that the three Potter patents involved in the Stewart-Warner Dual-Temp case are invalid, the United States Circuit Court of Appeals here has reversed a lower court's decision made in 1944 which found Stewart-Warner guilty of infringement and ordered the company to pay damages totaling \$238,000 to Potter Refrigeration Corp. and Refrigeration Patents Corp.

### New Technique In Measuring Moisture Content Will Insure a Dryer 'Freon'

WILMINGTON, Del.—A new technique for measuring the amount of water in "Freon" refrigerants with an accuracy of one part in a million will help to insure the keeping of the moisture content of "Freon-12" as applied by the producer to not more than 10 parts per million.

"A long series of practical articles on air conditioning design, installation, and operating problems by James LaSalvia began in 1947. These articles were later collected and reprinted in manual form by the NEWS."



"The industry added greatly to its knowledge of pre-packaging during 1947 as several research agencies conducted exhaustive tests of its practicability."

### Pre-packaged, Refrigerated Vegetables Keep 2 to 7 Times Longer Than Others In Test

By Chas. W. Hauck and John J. Crawford, Ohio Experiment Station

The term "shelf life" may be defined as the period of time during which the merchandise received by the retailer remains fresh, attractive, and sufficiently appealing to patrons as to be readily salable without price reductions. In this report it is used interchangeably with the term "salable life."

Normal room conditions consisted of temperatures ranging from 66° to 77° F., averaging 71° F. and relative humidity varying from 28% to 38%, averaging 33%. Mechanical re-temperatures ranging from 36° F. to 40° F., averaging 39°, and relative humidity varying from 75% to 90%, averaging 85%.

Pre-packaging and mechanical re-

frigeration together retained seven vegetables within 95% of the original weight for periods ranging from six to 24 days; or, in other words, from two to seven times longer than any of the other treatments. This combination of factors extended the shelf life of these seven products more than any other combination tried in these tests.

"More and more it was being proved that the public would respond to open displays of ice cream and frozen food products."

### Pre-packaged 'Bulk' Ice Cream Sales From Open Case Up Profits for Dairy

### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

Refrigeration Engineering Corp. Attains Full Output On Prefabricated Walk-Ins

Filtrine Water Cooling Systems Are Packaged

PACKARD, PATTERSON NAMED TO KEY POSTS

Curtis Names Morrison, Lodwick Vice Presidents

EDISON G-E CHANGES TO 'HOTPOINT, INC.'

Nance Hotpoint President

SWANEY HEADS KEROTEST; ROUSH IS VICE PRESIDENT

Cutler-Hammer Turns Out 'Acorn Size' Freezer Alarm

REMA SETS POLICY OF REFRIGERATION SHOW EVERY OTHER YEAR

K. M. Newcum Forms New Pittsburgh Firm

COULTER APPOINTED SALES MGR. AT LEHIGH

Fedders-Quigan Creates New Condenser Division

'Koldflo' System Featured By McCray In New Line

New 'Deepfreeze' Models Drop 'Circular' Lines

'Airserco' Becomes Name of Aircraft Service Co.

FRIGIDAIRE MAKES 'METER MISERS' IN COMMERCIAL SIZES

NFFLA Report Lists 8,870 U. S. Locker Plants

ELECTRIC AIR FILTERS INTRODUCED BY TRION

Jewett Associates Names Alarm 'Freezer Sentry'

Remington Room Conditioner Uses 2-Stage Ventilation, Variable Velocity, By-Pass

Sherer-Gillett's First Open-Type Self-Serve Meat, Dairy Case Has Mirror Magnifying the Display

KINETIC WILL EQUIP MIDWEST 'FREON' PLANT

A. G. Barkow Mfg. Co. Buys Out Ben Bar Sales, Inc.

DELANAN MFG. BUYS PERFECTION PARTS CO.

Brewer-Titchener Buys Eastern Firm To Raise Freezer Cabinet Output

### GEMCO COMPLETES FIRST CONDITIONERS

Cooler-Carbonator Gives 300 Glasses Each Hour

3.2-Cu. Ft. Home Freezer Added to Crosley Line

PHILCO BUYS REX PLANT IN LATEST EXPANSION MOVE

Airserco Introduces Evacuators for Hermetics

DRINK DISPENSERS MADE FOR SEVERAL VARIETIES

Fine Refrigerant Cylinder Permits Exact Charging

FEDDERS-QUIGAN STARTS UNIT CONDITIONER LINE

Recold Distribution to Expand Nationally

ZUMBRUN IS BRUNNER MANAGING DIRECTOR

Hussmann 'Endless Design' Display Case Introduced

210,248 FREEZERS SHIPPED IN 1946

New BTC Plates Have 'Cross Flow' Distribution

WESTINGHOUSE SHOWS 2-TEMP REFRIGERATOR

Halstead & Mitchell Makes New 2-Stage Condenser

BAKER SETS UP FACTORY, HEADQUARTERS IN MAINE

Rigidbilt Inc. Purchases New Factory In Chicago

ROSE BECOMES SALES MANAGER AT SCHAEFER

Gibson Gets Patent on 'Ups-A-Daisy' Range Device

DAVIDSON HEADS UP THERMORITE CORP.

Norge Produces First Video Show In Detroit

NEW G-E 2-DOOR TWO-TEMP MODEL LISTS AT \$399.75

Freez-Pak Makes Portable Refrigerator

SUPERIOR VALVE ELECTS SIEGFRIED GENERAL MGR.

Wile Heads Engineering For Recold Firm

W. C. NEWBERG IS AIRTEMP PRESIDENT

## Good Reasons why the trend is to VERTICAL Home Freezers

NOT THIS



THIS



- 1 Do Your Own Sharp Freezing
- 2 Eye-Level Access
- 3 No Fumbling or Bending
- 4 No Basket Juggling
- 5 No Lists to Keep
- 6 No Sorting
- 7 No Cold Air Lost While Baskets are Exposed
- 8 Uses 1/2 the Space of Horizontals
- 9 Costs Less to Operate
- 10 Deep Well for Large Items
- 11 No Heavy Cover to Lift

and Good Reasons why the

Dealers Inquiries WRITE TODAY FOR FRANCHISE DETAILS

**Barkow COLD SHELF OFFERS YOU TODAY'S BEST FREEZER DEAL**

Manufactured By **AUG. G. BARKOW CO.,** 2230 S. 43rd St., Milwaukee, Wis.





"With allocations on a pre-war takings basis, some sections that had developed mightily in the war years weren't getting enough merchandise, and gray markets developed."

## Dealers Says Failure To Readjust Quotas To New Potential Causes South's 'Gray Market'

ATLANTA — Electrical appliance manufacturers are failing to appreciate their new and unbelievably expanded market in the southeastern states, district managers, distributors, and dealers in this area maintain.

As a result many of the appliances being purchased in this area are bought in "gray market" operations.

This market, small and neglected before the war, has assumed tremendous proportions, they agree. They firmly believe it is destined to play a much greater role in the nation's appliance picture than was dreamed possible a decade ago.

"Parts and supplies wholesalers were expanding their lines, and tending to more merchandising efforts."

## Wholesaler Finds In 'Hotel Showing' a Way To Exploit Larger Equipment

HARTFORD, Conn. — Joseph Simons Co., refrigeration equipment wholesaler here, held a rather unusual "hotel showing" this month of some of the products it sells its customers.

The special showing was on certain products which did not lend themselves to display on the floor of the Simons company headquarters.

# 1947

"Remember the 'Newburyport Plan'? It was a 'community plan' to bolster sagging sales, but it didn't catch on very widely."

## More Cities Offer '10% Price Cut'; Many 'Big Ticket' Items Exempted

NEW YORK CITY—A rash of community price-cutting plans following the general pattern of the much-publicized "Newburyport Plan" of across-the-board price cuts of 10% in retail stores, thus far doesn't seem to have been extended to refrigerator and appliance prices.

It is said that generally speaking, stores were exempting from mark-downs those goods on which manufacturers have fixed national prices.

The Newburyport Plan, it was stated by Norman J. Randell, director, is not a "markdown sale" scheme.

"Price tags aren't being changed," he said. "It's just that the consumer is refunded 10% of the amount of his purchase."

"Home freezers, being a brand new appliance and not a substitute for any other item, required intensive prospect and user education, the industry found."

## St. Louis Utility Teaches Proper Use of Home Freezer For Bakery Goods

ST. LOUIS — Through expensive experimentation into the problem of quick-freezing of bakery products, the Home Economics Department of the Union Electric Co. here, is encouraging St. Louis housewives to utilize frozen foods.

The 10-year old home economics department, headed by Miss Esther Lee Bride, has pioneered the way in frozen bakery products in the St. Louis area—beginning in late 1944 when the department installed an experimental freezer, which was to be used to help housewives meet war-time food problems economically.

"Justice should be meted out in a cool, calm, and deliberate fashion, with an emphasis on the 'cool.'"

## Air Conditioning Aids Cool-Headed Decisions, Pittsburgh Judge Says

PITTSBURGH—This time it's the judge who's pleading for mercy—in the form of an air conditioning system.

"As you know," Judge Samuel Weiss wrote the County Commissioners, "I have a bad sinus condition and it is practically impossible for me to work in my chambers due to the humidity. The only way possible for me to work during the summer months is in a room that is sufficiently air conditioned."

"Comfort cooling can be helpful in keeping students alert, educational institutions were learning."

## Air Conditioning Helps U. of Omaha Absorb Record Enrollment

"Bone banks" were a new contribution of refrigeration to the public health."

## Human Bones Preserved Under Refrigeration for Graft Operations

NEW YORK CITY—A refrigerated human bone bank, said to be the first in this country, has been established at the New York Orthopedic Dispensary and Hospital, according to Dr. Leonard F. Bush.

Dr. Leonard's paper revealed that storage in a freezer at -24° Centigrade has enabled the hospital to preserve bones and bone chips removed during operations, which formerly had to be discarded. Al-

"The Department of Defense was trying to jell some standardization out of its experiences in World War II."

## Proposal on Standard Compressor For Armed Forces Placed Before Industry

WASHINGTON, D. C.—A proposal for a "standard" refrigeration compressor for use by the military has been placed before the industry by a representative of the armed forces of the United States.



The second postwar All-Industry Exposition was one of the biggest ever held. The NEWS again used a cartoon to depict some of the industry problems of the moment and the groups taking part in the show.

"Laboratory uses for mechanical refrigeration equipment continued to expand."

## Temperatures Held Within 0.3° F. Required In Blood Fractionation Laboratory

LANSING, Mich. — Temperatures are held to within 0.3° F. in the new blood fractionation laboratory of the Michigan Department of Health here

where gamma-globulin will be extracted from human plasma to fight measles and other diseases. Temperatures are extremely critical.

"Reports from medical authorities showed that refrigeration anesthesia had proved itself."

## Refrigeration Anesthesia Proves Beneficial, Safe for Amputations, Doctors Report

CHICAGO — "Experience to date continues to confirm the safety and benefit of refrigeration anesthesia," Drs. Lyman W. Crossman and Frederick M. Allen declared in a report appearing recently in the Journal of the American Medical Association.

"Not only is this anesthesia by brief chilling advantageous for orthopedic and reconstructive operations, but also successful healing has been reported in limbs which have been refrigerated for a number of days or weeks."

"With low temperature equipment, the industry was warned that equipment had to perform on the nose—or else."

## Most Retail Cabinets Checked Operating Above 0°; Stores Advised To Ask for Temperature Guarantee

## FROM ONE PIONEER TO ANOTHER . . .



JOE OBERC—In the refrigeration business since 1923 and serving the trade as a wholesaler since 1933—joins old friends in congratulating AIR CONDITIONING & REFRIGERATION NEWS on its Silver Anniversary.

**PIONEER JOBBERS**  
SERVING THE TRADE SINCE 1933

**J. M. OBERC, INC.**  
55 OAKMAN BLVD., DETROIT 3, MICH.  
BRANCHES  
9749 Bessemore Detroit 13, Mich. 14211 Ford Rd. Dearborn, Mich.

# LOOK!



Would you like your product to be as modern and up-to-date as this building front?

If so, Walter P. Hill, Inc., is in a position to redesign your product or your processes to improve quality and reduce the cost.

If special tools or machinery are needed to accomplish this, the entire process or facilities will be designed, built, and proved in production by us.

Walter P. Hill

22183 Telegraph Rd., Detroit 19, Mich.

Phone: Southfield 3593





"One of the most intriguing and useful of the industry's new products is the portable dehumidifier."

## Use of Electric Dehumidifier Cuts Mayflower Hotel's Redecorating Time by One Third

WASHINGTON, D. C.—Using a Frigidaire electric dehumidifier to speed drying of plaster, paint, and shampooed rugs, the Mayflower hotel here has been able to reduce room redecorating time by one third, hotel officials have reported.

Allowing time for plaster, paint, and rugs to dry had been a big factor

in delaying the reopening of rooms to guests, with a consequent loss of revenue, they indicated.

With the dehumidifiers, however, the plaster will dry in less than 16 hours and rugs in about 12. Rapid drying of rugs, they noted makes them fluffier and prevents dry rot.

"A great many new dealers had entered the business after the War, and the big question was—and is—how many would stick?"

## Big Exit from Field by Dealers?

### NERA Says Many 'Sideline' Outlets Are Quitting Appliances, But Another Study Shows Few Leaving

PITTSBURGH—Appliance dealers are not falling by the wayside in any great numbers in the areas of northern and western Pennsylvania served by the West Penn Power Co.—an area which does not include any metropolitan centers, but is dotted with numerous smaller cities and towns.

In fact, of the nearly 1,000 dealers who sell to the some 230,000 domestic meters served by West Penn Power, probably not more than 25 took down their signs in the last 12 months. And in some cases, the stores didn't actually close up, but were purchased by another dealer and operated as a branch or part of a chain.

CHICAGO—National Electrical Retailers Association says that a growing number of dealers—particularly those that handled appliances as a sideline—are going out of business, and Nera expresses the thought that this is probably a healthy thing. The association reported in a recent bulletin that it had made a telephone survey of some 500 dealers in the area around, but outside of metropolitan Chicago.

"Dealer after dealer, mostly sideline variety, told us he was quitting," said the report. "Distributors in another area informed us that 30% of dealers were delinquent in payment of bills."

"Many old-timers began to suspect that salesmen were neglecting the very methods that had been the foundation of the industry's success."

## What Is That Strange Odor? Fresh Air?

Is it smart to be lazy? Are you like the fellow we met recently? "You have talked a lot about frozen foods and the home and farm freezer business in your editorials recently," an Eastern refrigeration distributor told us as he arrived for the All-Industry Exposition. "And so I thought there must be something to it. But my men report we don't have many prospects for freezers. How can you sell if you don't have prospects?"

This old friend, who used to get his biggest thrill out of beating Frigidaire and Kelvinator in his territory, actually had forgotten how you find prospects.

Prospect lists for specialty products—like freezers—are obtained through "cold canvassing." For the benefit of newcomers, and amnesia victims amongst the old-timers, "cold canvassing" means sending a crew of men out to ring doorbells—street by street, house by house.

These "cold canvassers" don't waste their lives away in the hot, stuffy atmosphere of a showroom or office. They inhale the invigorating ozone of cold, fresh air. They get off their fat cans, ride the street cars, tramp the streets, and sing the gospel of a new specialty product.

Here's the pitch:

See the people. Tell the story. When you get "One Foot In the Door," explain why frozen foods cabinets will cut soaring food bills. . . . Follow up those prospects! Build a profitable new business!



"While it has branched out into multitudes of applications, the main function of refrigeration continues to be the proper preservation of perishable foods."

## Poor Refrigeration Big Cause of Food Poisoning—U. S. Health Chief

WASHINGTON, D. C.—Lack of proper refrigeration is a major contributor to the frequency of food poisoning in the United States, asserts U. S. Assistant Surgeon General Mark D. Hollis.

Hollis, who is chief of the sanitary engineering division, Public Health Service, Federal Security Agency, backed up his statement with a 32-page compilation of reports by state and local health authorities on disease outbreaks during 1946 that were conveyed through foods other than milk and milk products.

"The compilation shows," he said, "that in 1946 there were 299 outbreaks of disease from contaminated food incapacitating 12,526 people, 17 of whom died. The food was usually contaminated through insanitary conditions or infections of food handlers."

"More important, however, early and adequate refrigeration was lacking. Even if contaminated, food will

not usually develop toxins and cause food poisoning if properly refrigerated promptly after preparation.

"A change in guarantee policy was put into effect by a parts manufacturer."

## DETROIT LUBRICATOR ALTERS GUARANTEE POLICY ON VALVES

DETROIT—A revised repair and replacement policy on the line of expansion valves it produces for the refrigeration industry has been announced effective Jan. 1, 1948, by the Detroit Lubricator Co.

The new policy provides for the replacement of defective valves through authorized wholesalers on the basis of a 90-day guarantee, and repair of defective valves through a manufacturer on the basis of a one year guarantee.

"Coin meter selling has proved useful through the years in selling both household and commercial refrigeration equipment."

## SURVEY REVEALS METER PLAN OF PAYMENTS GROWS IN COMMERCIAL REFRIGERATION SALES

CHICAGO—Commercial refrigeration dealers across the country are again giving consideration to the meter plan as a means of stimulating sales, according to a recent dealer survey made by the International Register Co. here.

Apparently the 436 dealers reporting in the survey who had used the meter plan before had good results with it.

Out of this group 323 (or 74%) stated they would use the meter plan again.

Stronger . . . safer . . . and money-saving, too!

# CHEVROLET Advance Design TRUCKS

Strength to carry your loads . . . power to move your loads and keep moving them . . . extra features that add up to more service, safety, operating comfort and economy! These new Chevrolet trucks offer you more of the things that count on the job . . . more of the money-making, money-saving features you want and need on jobs that test a truck's real value. Check what Chevrolet trucks offer and

see for yourself. Valve-in-head engines that squeeze more power from every drop of gas. Self-energizing brakes for extra stopping power—greater safety. Wide-base wheels for increased tire mileage. These new Chevrolet trucks even offer extra driver comfort—with new cab seats and Ventipanes. But learn all the facts now. See the new Chevrolet Advance-Design trucks at your dealer's today.

CHEVROLET DIVISION OF GENERAL MOTORS, DETROIT 2, MICHIGAN

First in demand  
First in value  
First in sales



### ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—the 105-h.p. Loadmaster or the 92-h.p. Thriftmaster—to give you greater power per gallon, lower cost per load • POWER-JET CARBURETOR — for smooth, quick acceleration response • DIAPHRAGM SPRING CLUTCH—for easy-action engagement • SYNCHROMESH TRANSMISSIONS — for fast, smooth

shifting • HYPOID REAR AXLES—for dependability and long life • NEW TORQUE-ACTION BRAKES—for light-duty models • PROVED DEPENDABLE DOUBLE-ARTICULATED BRAKES — for medium-duty models • NEW TWIN-ACTION REAR BRAKES — for heavy-duty models • NEW DUAL-SHOE PARKING BRAKE—for greater holding ability on heavy-duty

models • NEW CAB SEATS—for complete riding comfort • NEW VENTIPANES — for improved cab ventilation • WIDE-BASE WHEELS—for increased tire mileage • BALL-TYPE STEERING—for easier handling • UNIT-DESIGN BODIES—for greater load protection • ADVANCE-DESIGN STYLING—for increased comfort and modern appearance.







Participating in a panel discussion on manufacturers' guarantees before the Refrigeration Contractors Association were (l. to r.): H. E. Wheeler, Air Comfort Corp., Chicago; J. F. Floreth, Westerlin & Campbell Co., Chicago; J. W. Krall, Tyler Fixture Corp.; and Russell S. Penn, Talbert-Thomas Co. of Michigan.



On a panel discussing contractor licensing were Nathan Edelstein, Refrigeration & Air Conditioning Guild, New York City; Neal S. Templin, Refrigeration Contractors Association, Inc., Los Angeles; William B. Henderson, Air Conditioning & Refrigerating Machinery Association; and John C. Rehard, chief refrigeration safety engineer, Detroit.

"At a meeting of the Refrigeration and Air Conditioning Contractors Association, two great points of controversy—guarantees and contractor licensing—were thrown up for open debate in one of the industry's most interesting conclaves."

## Guarantees on Commercial Equipment Draw Criticism

### Careful System of Inspection Would Avoid Disadvantages of Licensing

By William B. Henderson, Executive Vice President, ACRMA

### Properly Administered Licensing Is Definite Benefit to Public, Detroit Official Declares

### Licensing Offers Contractors a Check On Proper Operation of Safety Code

"The Fifth All-Industry Show brought to light many new products designed for the industry's expanding markets."

## SHOW OPENS 'SELL AGAIN' DRIVE

### New Products Give Industry Means To Maintain Volume

CLEVELAND—As the Fifth All-Industry Refrigeration & Air Conditioning Exposition opens here with

the greatest display of refrigeration and air conditioning products ever to be shown, those attending will be girding themselves for the first real postwar battle for business in the markets which they sell.

"Old Regulation W bounced back into the picture again."

## New Terms: 20% Down, 15 Months

WASHINGTON, D. C.—Down payment of 20% with 15 months to pay the balance will be required on refrigerators, room air conditioners, and other major appliances by newly revived Regulation W, the Federal Reserve Board revealed here Thursday night.

The regulation becomes effective Sept. 20.

"Contractors continue to fight for their right to sell commercial refrigeration equipment."

### Beer Firms' Licenses Suspended on Claims of Re-Selling Equipment

LINCOLN, Neb.—Alleged subsidization of dealers by furnishing refrigeration and other equipment resulted in suspension of licenses for periods of 10 to 21 days for four Nebraska beer distributors and reprimands for three others by the Nebraska Liquor Commission following recent hearings here.

"Studies of prices charged for installation and service work are hard to come by, but the NEWS has found it possible to make a few surveys along this line."

### N. Y. Guild Survey Shows Average Prices Charged for Service Work In N. Y. Area

## WE ARE NOT UP IN THE CLOUDS

— BUT —

Our Growth Has Been Astronomical

Feb. 1, 1934

We started on a second floor, in a room 20 ft. x 20 ft.

Today we occupy a completely stocked 2 story building with loading platform and traveling cranes.

**AETNA SUPPLY CO.**

310 EAST 138TH STREET  
NEW YORK 54, N. Y.

## 1948

"REMA-RSES Educational Conferences and Expositions proved a popular way of getting information into the field and allowing service engineers and contractors to quiz factory executives and engineers face-to-face."

## First of REMA-RSES Conference Succeeds In Educational Aims

SAN FRANCISCO—The Western Refrigeration Educational Exhibit and Conference, first in a series of regional educational meetings jointly sponsored by Refrigeration Equipment Manufacturers Association and Refrigeration Service Engineers Society, drew a registered attendance of some 1,100 persons to a three-day conclave of educational exhibits and meetings last weekend at the Palace hotel here.

Over-all reaction to the educational-conference idea was very much on the favorable side.

"Labor jurisdiction in the refrigeration contracting field was the subject of a west coast dispute."

## WEST COAST UNION HEARINGS MAY SET INDUSTRY PATTERN

LOS ANGELES — Refrigeration Fitters Protective Association's petition seeking an election to determine whether or not it shall be certified as a bargaining agent for refrigeration fitters and mechanics employed by refrigeration contractors is now being heard by the National Labor Relations Board in an extended series of hearings, the outcome of which may affect all future relations in the refrigeration contracting fields.

"Problems with unions arose in some unlikely spots."

## UNION CONTROVERSY ON ROOM COOLER INSTALLING SETTLED

CINCINNATI—A three-day strike by members of the local Pipefitters Union against an air conditioning contractor here over his hiring non-union men to install and service self-contained air conditioners has been settled, temporarily at least.

The union executives agreed to set up a Metal Trades Division of the Pipefitters which these air conditioner men could join.

"Still lots of talk and not too much action on the heat pump, although some ideas about the market were beginning to jell."

## Panel Cooling and Heat Pump Took Spotlight At N. Y. Show

NEW YORK CITY—The logical market to aim for in the initial promotion stages of the heat pump is the commercial field, particularly restaurants.

This point was brought out by W. E. Johnson of General Electric Co. who participated in a symposium on "The Heat Pump for Year-Round Air Conditioning" conducted by the American Society of Heating & Ventilating Engineers at its fifty-fourth annual meeting held in the Commodore hotel here Feb. 2 to 5.

"Grocery chains were showing signs of being ready to go all-out for self-service merchandising."

## Kroger 'Pilot Store' Tests New Methods

CINCINNATI—Self-service refrigeration has been worked out to the last degree in the unique "pilot store" which Kroger Grocery & Baking Co. has developed in an "average income" district here, according to Joseph D. Hall, president of the national retail grocery firm.

"Expansion in the frozen food field called for more and more contributions in the way of new equipment from the equipment producers."

## Good Low Temperature Display Fixtures Are Still Bottleneck In Frozen Food Distribution

By 1948 the home freezer field had shaken down pretty well into two groups of substantial producers, one being the full appliance line makers such as Norge, Kelvinator, Frigidaire, G-E, etc.; and another group of firms that had made their mark in the home freezer field such as Revco, Deepfreeze, Ben-Hur, Barkow, Victor, Amana, Manitowoc, and others. Home freezers had been improved with such accessories as lift-out storage baskets, special ice cube trays, and alarms.



"A new chapter in specifications publication was started with the offering of home freezer specifications data."

## HOME FREEZER SPECIFICATIONS!

### 144 Models, 58 Makes Represented In First Publication of Data

DETROIT—For the first time in the history of the industry, comparative specifications of all makes and models of self-contained home and farm freezers now in production have

been collected, and appear exclusively in AIR CONDITIONING & REFRIGERATION NEWS.

Publication of specifications "separates the men from the boys." Two years ago more than 400 manufacturers claimed to be producing freezers. Now the roster has shaken down to those substantial makers who are in business to stay.

## MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

### Missouri Leads In Number of New Locker Plants as National Total Reaches 10,617

### Heat-X-Changer Air & Water Cooled Condenser Aimed At Water Shortages

### DUCTLESS 'UNITRANE' SYSTEM INTRODUCED TO FIELD

### Unit Producer States Case for Standard 'One Year from Date of Manufacture'

### DAIL HEADS SERVEL ELECTRIC DIVISION

### Godfrey, Roberts Top List Of Staff Appointments Made for Frigidaire

### THOMPSON IS SALES DIRECTOR OF KINETIC

### Kelvinator Dealers Get 'Group Life' Policies

### U.S. APPEALS COURT UPHOLDS VALIDITY OF 'RECORD' WATER DEFROST COIL PATENT

### Tyler Case Features Automatic Defrosting

### CLAYTON & LAMBERT DEVELOPS 8-FT. GAS REFRIGERATOR

### New Household Models Shown by Harvester

### PHILCO CORP. ACQUIRES ELECTROMASTER CO.

### VALVE MANUFACTURER SEEKS SWING TO 'AUTOMOTIVE TYPE' GUARANTEE

### BECHAUD IS BEN-HUR VICE PRESIDENT

### WEBBER ENGINEERING TO MAKE HEAT PUMP

### STACKPOLE BECOMES V. P., HEAD OF SALES FOR AIRTEMP

### Wagner To Coordinate Commercial Dealer Sales For Frigidaire Division

### BLEES NAMED CROSLLEY GENERAL SALES MGR.

### Paragon Automatic Defroster Has 4 Settings To Control Length of 'Off' Cycle

### COPELAND SHOWING 7.5-HP. HERMETIC UNIT

### Warren 'Woggle-Scrub' Cooler Does Job By Agitating Milk In Center of Can

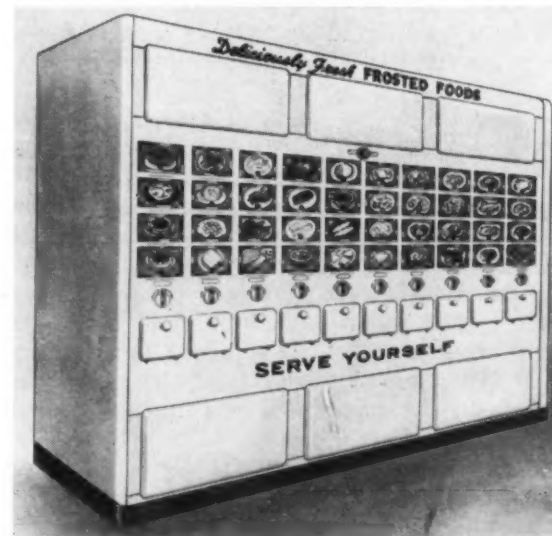
### 'DELIVERED' PRICES ESTABLISHED BY BUSH FOR STANDARD ITEMS

### Jordon's Table-Top Model Bows April 1

### AMINCO PRODUCTS CO. FORMED IN DETROIT

### '100 Times More Sensitive,' No Lag Claimed for Electronic Air Conditioning Control

### REMA MILK COOLER SECTION TO DRAW UP RATING STANDARDS



Automatic vending of frozen foods was much talked about in the early postwar period and some trials were made. But not too much ever came of it.



# GUARANTEE

This certifies that \_\_\_\_\_ Compressor, Model No. \_\_\_\_\_  
Serial No. \_\_\_\_\_, has been carefully inspected on date of installation, \_\_\_\_\_  
Should any part or parts prove defective during the period of

## ONE YEAR

from above date, we hereby guarantee to replace same, FREE OF CHARGE, F.O.B. FACTORY.

### COMPLETE FREE SERVICE

shall be furnished for operation of above machine (s) for a period of 90 days from above date, during the hours only of between 8 a. m. and 5 p. m. week days and from 8 a. m. until 12 noon on Saturdays.

Should it be necessary to call for service other than above specified, buyer agrees to pay only the difference between the regular hourly scale and overtime which are figured as follows: \$2.50 per hour for regular time, time and one-half for overtime and double time for Saturday afternoons, Sundays and all holidays.

It is understood and agreed that should the account become delinquent or serviced by other than the seller, this guarantee in its entirety is cancelled.

#### INSTALLATION:

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_  
Per \_\_\_\_\_  
Refrigeration **WRIGHT Service**

"Restaurants continued to be a big market for refrigeration equipment, and for their own benefit they should be an even better one."

### RESTAURANT MEN TOLD FIXTURES VITAL TO PROFIT

ATLANTIC CITY, N. J.—The refrigeration and air conditioning industry will play an increasingly important role in keeping the nation's restaurant industry in the healthy profit status, it was made clear at the convention and exposition of the National Restaurant Association.

After a 10-year span of increasing volume and profits, the restaurant business is in a leveling-off period, according to Willard Marriott of Washington, D. C., president of the National Restaurant Association.

Relations between manufacturers and dealers were becoming looser in the face of the expressed attitude of the courts.

### FRIGIDAIRE DROPS 'EXCLUSIVE AREA' CONTRACT CLAUSE

DETROIT—New Frigidaire dealer contracts issued Sept. 26, no longer contain the usual territory protection clause, General Motors officials announced.

"A Frigidaire dealer in Kankakee is now free to sell any Frigidaire appliance in Alaska if he wants to," a press representative asserted by way of illustration.

"There is such a thing as carrying the 'be nice to salesmen' policy too far."

### Dealer Sues Salesman for Failing To Make Closing In 5 Months

ALBANY, N. Y.—City Court Justice Herzog awarded an Albany appliance firm \$1,472.22 plus \$25 court costs in a suit against one of its salesmen, who allegedly failed to make a sale in five months.

The award went to Mullally Bros., 361 Pearl St. who had contended they hired a salesman and agreed to loan him \$75 a week, against a commission of 50 per cent of the profit on any item he sold.

The defendant claimed the \$75 weekly he was paid constituted a drawing account.

"In the hey-day of the give-away promotion, Crosley topped all previous efforts in any field."

### Crosley Set To Begin \$2 Million Giveaway

NEW YORK CITY—Details of a \$2,000,000 contest to be staged by Crosley Div. of Avco Mfg. Corp. were revealed by W. A. Blees, Avco vice president and Crosley general sales manager, at the press showing of the company's new 1950 line in the Hotel Commodore here.

Blees described the contest as "by far the biggest giveaway in history."

"A continuing problem in the commercial refrigeration and air conditioning fields has been the matter of financing for dealer operations, and many manufacturers developed plans to lend a helping hand."

### WORTHINGTON DISTRIBUTORS GET REPURCHASE PLAN

NEW YORK CITY—An unusual distributor's floor stock repurchase plan, designed to help commercial refrigeration and air conditioning distributors obtain sufficient bank credit to properly carry on their operations, was announced by the Worthington Pump & Machinery Corp.

Worthington will guarantee to repurchase any of its equipment carried in stock by the distributor at up to 80% of the sales price.



"All that business about home freezers in politics wasn't too good for the country, but the publicity didn't hurt the booming home freezer business, because it pointed up what a desirable product it was."

## Chicago Sunday Tribune VAUGHAN'S FREEZER STORY!

### Aboard Train; Continues Trip East

Medical Aid SENT TO ME  
Given Him at 2 Stations BY FRIENDS.  
HE ASSERTS

"Some archaic legal barriers to the sale of frozen foods were being knocked down."

### San Francisco Fight Won on 'After Hours' Frozen Food Selling

SAN FRANCISCO—A revised ordinance took effect July 22 in San Francisco permitting the unrestricted sales of frozen meats, poultry, and fish after 6 p. m. week-days and all day long on Sundays and holidays. The liberalized ordinance had been opposed by the Butchers' Union and some retail meat dealers.

It also enables meat merchants to operate without walk-in boxes, heretofore required, permitting them to have meat cut at central locations, then delivered to freezers throughout the city. Merchants must provide coolers and refrigerators adequate in size and of a construction approved by the City Health Dept.

"Business was getting tough enough without having the Army muscle in on it."

### Armed Forces Will End 'Special Order' Business at PX's

WASHINGTON, D. C.—The armed forces have agreed to discontinue "special order" business at military stores starting Oct. 1, it was announced by Rep. Philip J. Philbin, chairman of a House Armed Services subcommittee, investigating charges brought by the National Association of Appliance and Radio Dealers.

The special-order arrangement permits military stores to order items not carried in stock (such as major appliances) for persons entitled to buy at the outlets. Witnesses have told the subcommittee that the stores sell home furnishings and other articles at only slightly more than wholesale prices.

### Contractor Solves Guarantee Problem

SAN DIEGO, Calif.—Ninety-nine out of 100 customers are "perfectly happy" with the "90-day free service—one year guarantee on parts" policy originated in 1941 by Wright Refrigeration, Inc., here, according to R. A. Wright, president of the contracting and service firm.

"It (the guarantee) seems to stipulate all the things that some dealers are talking about six years later. It might be the reason why a lot of them do not stay in business over any particular period of time."

"However, most of the other boys around here go along with me on this 90-day deal and it is very sel-

dom that we have to deviate from it.

"If we got into competition where someone made an issue of it—we would give them one year's free service rather than lose the order. I think we have had to do this just exactly five times in the past six years. We find that the customer does not even expect such silly service unless our salesmen themselves promote the idea in a customer's head."

"Furthermore, we have found that when we give a man one year's free service and something goes wrong on the thirteenth month, they just have a fit unless we go out and do the work gratis."

"Self-service was continuing to make gains, and a patent decision opened wide the field for development and production of equipment."

### Women Endorse Self-Service Meats But Their Continued Approval Depends on 3 Big 'If's'

CHICAGO—"Self-service meats are here to stay. Lots of women have expressed by their purchases that they like this new way of buying meats, and they are the ones who hold the purse strings. But let us keep constantly in mind those danger signals expressed by women—'Can I depend on the quality? Am I getting full weight? Is it really fresh?'"

"Both government and industry were trying to solve some of the problems of doing business at export."

### Current Characteristics of Foreign Cities Listed

DETROIT—A 30-page pamphlet listing electrical current characteristics of foreign cities and countries has been issued by the U. S. Dept. of Commerce. Copies are available from 1038 Federal Bldg., Detroit.

### Display Case Patents Held Invalid by U. S. Court

CINCINNATI—Patent restrictions on the manufacture of a new-type, open, self-contained, refrigerated food display case were ordered removed in a decision by U. S. District Judge John H. Druffel.

Judge Druffel made the decision in the case of C. V. Hill & Co., Inc. against the Royal Store Equipment Distributors of Cincinnati and the Weber Showcase and Fixture Co., Inc., Los Angeles.

The court dismissed the complaint, finding that all patents involved were invalid because they "lacked invention over the prior art." Court officials said the action meant that such display cases now may be manufactured by anyone, free of restriction or royalty payments.

## Serving the Southwest



Over the years UNITED REFRIGERATION COMPANY has grown—and will continue to grow... to keep pace with the expanding southwest... and to provide our customers with the finest refrigeration, air conditioning and heating supplies.

### UNITED REFRIGERATION COMPANY

Corpus Christi — SAN ANTONIO — Harlingen



Add a complete set of these wonderful little brushes to your service kit! You'll be surprised at the time they save on every job. They clean a fitting with one quick twist! Replace the old finger-and-sandpaper method, avoid cut and sore fingers, make every installation easier and faster.

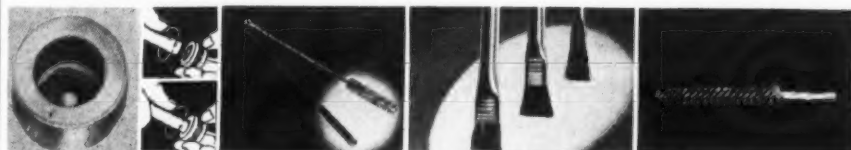
These long-wearing Schaefer Copper Tube Fitting Brushes are made of Stainless Steel Wire, strong, resilient, and rustproof, secured in a four-ply wire handle, with comfortable hand-fitting wood grip. Perfectly round, they help you to tighter-fitting, cleaner, leakproof installations.

Order a complete set, 12 sizes, at your Refrigeration Equipment Wholesaler.

O.D. Fitting Sizes			
1/4"	3/8"	1"	1 1/2"
3/8"	1/2"	1 1/4"	1 3/4"
1/2"	3/4"	1 3/8"	2"

There's a RIGHT Schaefer Brush for Every Need...

## SCHAEFER BRUSHES — MILWAUKEE —



**COPPER PIPE CLEANING BRUSHES**  
For quickly cleaning outside of pipe and tubing ends. Stainless Steel in 3/8", 1/2", 3/4", 1" O.D. sizes.

**TUBE CLEANING BRUSHES**  
Stainless Steel Wire bristles, 12" handles, single or double spiral, in diameters from 1/4" to 1 1/2".

**ACID OR DOPE BRUSHES**  
Selected black hair or bristle in 3" tin ferrules. Widths, 3/8", 1/2" and 3/4".

**CONDENSER TUBE BRUSHES**  
Rustproof wire, double spiral, in cadmium plated nipples, threaded for extension handle. 4 1/2" long, in 1/2", 3/4", 1", 1 1/4", 1 1/2" diameters.

See Schaefer Brushes at your Refrigeration Equipment Wholesaler, or write for details on special brush needs.

## Schaefer BRUSH MFG. COMPANY

117 W. Walker Street, Milwaukee 4, Wisconsin  
BUY SCHAEFER... IT'S SAFER





"Room cooler sales continued to rise, but those familiar with the field saw need for more emphasis on its many functions."

### Selling Room Conditioners Offers No Problems, But Some Fundamental Steps Must Be Taken

By Herbert L. Laube, Remington Corp.

#### The 6 Functions of Room Air Conditioners

Room Air Conditioners, and when you need them.	Winter	Spring	Summer	Autumn
1. VENTILATION—Bringing in without drafts an adequate but controlled, supply of fresh outdoor air	X	X	X	X
2. AIR CLEANING—Filtering dangerous and unsanitary dust, soot, and pollens out of the air admitted	X	X	X	X
3. AIR CIRCULATION—Replacing stagnant room air with air in proper motion—stimulating and refreshing	X	X	X	X
4. NOISE ELIMINATION—Hushing outdoor noises to maintain indoor quiet	X	X	X	X
5. COOLING—Cooling room and ventilating air to provide healthful, reviving relief from heat in later spring, summer, and early fall		X	X	X
6. DEHUMIDIFICATION—Removing excess moisture from oppressively damp, warm air in muggy seasons		X	X	X



"Commercial refrigeration dealers grew with the industry and were trying out some hitherto-untouched promotion angles."

### Commercial Equipment Loaded on Trailer, Peddled In Country Doesn't Come Back

KALAMAZOO, Mich.—"We've just tried this idea for about a week, but if it continues the way it started out, it is going to be a humdinger."

"Just a short time ago," Ihrig explained, "We had a trailer built especially for us that could be attached to any of our trucks or salesmen's cars. So last week (early July), we loaded her up with a couple of bottle coolers and a freezer and sent two salesmen out into the country with it."

Ihrig likened the idea to visual education in schools. When the prospect can be shown exactly what the salesman is talking about, he is much easier to convince and turn into a customer.

Ihrig pointed out that the trailer is being sent out to rural customers who would have to make a special trip into town to see a case or freezer they wanted. Being busy, they might put off the trip for weeks. So sending the merchandise to them is a real convenience.

"Contractors won a fight in California on the issue of direct selling of fixtures by dairy companies."

### Repeal of Calif. Dairy Selling Law Is Blocked

SAN FRANCISCO—California refrigeration contractors have won another round in their lengthy battle with ice cream manufacturers and distributors over the sale and maintenance of refrigeration equipment.

The contractors' latest victory came when the Senate Committee on Agriculture refused to report Senate Bill No. 393. This bill, sponsored by the ice cream industry, would have repealed a provision of the state agricultural code which reads:

"The selling of any new equipment by a distributor or ice cream manufacturer to any customer or individual at a price other than the printed retail list price of the equipment . . . shall be prohibited."



The 1949 All-Industry Show was notable on a number of counts, numbered among them the photo taken of Herman Spoehrer of Sporlan Valve Co., a past president of REMA and leader in that group for many years, joining in the fun at one of the entertainment features provided at the Show. Anyone reading through this issue would quickly get the impression that those engaged in the refrigeration business are a dead-serious, hard-working aggregation, which is true, but it doesn't gainsay the fact that they can have a lot of fun at the proper times.

Exhibits at the 1949 Show ran the gamut from packaged units like the Westinghouse water cooler that also provides ice cubes and storage space; and a big Brunner V-type compressor with the new modulation control.



"Packaged air conditioners were handling jobs once thought to be outside their scope."

### Proper Application of Package Air Conditioners In Theaters

By Don V. Petrone, Vice President, Typhoon Air Conditioning Co., Inc.

In most air conditioned theaters, the conditioned air is supplied by a conventional central plant usually located in the basement, more often, however, in a penthouse on the roof or in a separate shed built only for this purpose. The conditioned air is distributed to and throughout the theater by an elaborate system of ducts connecting to this central plant.

In the majority of cases this ductwork is installed while the theater is in construction. In existing theaters, installation of complete ductwork is costly, sometimes impractical or even impossible. However, many existing theaters which have no facilities for air conditioning can now be air conditioned satisfactorily at comparatively low cost by the use of self-contained floor model air conditioning units.

The self-contained units are distributing conditioned air directly to the occupied section. This fact will permit the theater operator to get individual zone control in his theater.

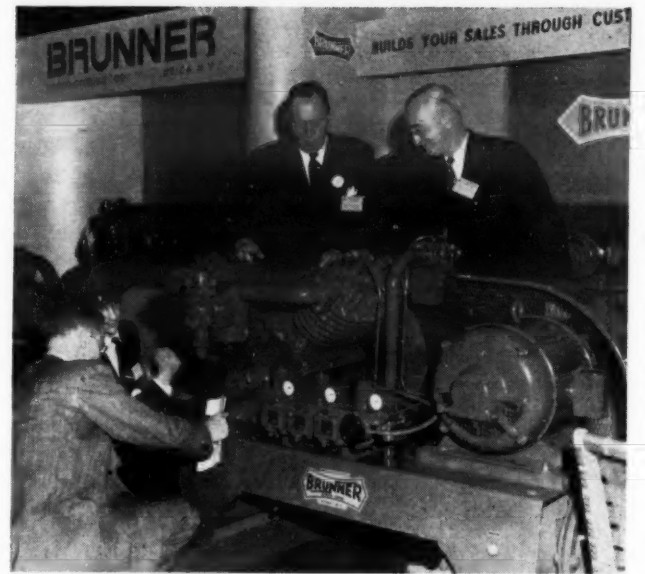
"Waterworks officials were sounding the tocsin about the shortage of water, and in some quarters it was feared that the refrigeration and air conditioning industry might be the goat."

### WATER SUPPLY IS CRITICAL PROBLEM, ASRE IS TOLD

CHICAGO—Something beyond the usual discussions of technical problems and advancement, elections of new officers, etc., came out of the annual meeting of the American Society of Refrigerating Engineers here as a conference discussing the problem of the nation's apparently diminishing water supply pointed to a possible crisis for the industry.

Representatives of the American Waterworks Association painted a gloomy picture of the water supply situation, pointing out that great increases in consumption and failure to re-charge sources or to create new pumping and supply facilities were leading to a critical situation.

Members of the refrigeration and air conditioning industry who spoke at the conference emphasized that they would cooperate in helping to find a solution to the problem, and had already done this through the development and use of water re-use devices such as evaporative condensers and cooling towers. At the same time, they asked that the water suppliers not single them out as a special target in the matter of finding a culprit for the greatly increased use of water.



### MILESTONES FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

#### 5 REFRIGERATOR MODELS SHOWN BY DEEPFREEZE

Ruslander Acquires Jewett Refrigerator

Amana Enters Household Refrigerator Field

Morris, Thomas Get New Posts at McQuay

Oasis Dehumidifier Takes 3 Gals. of Moisture from Air Within 24-Hour Period

QUINN APPOINTED TO RECORD SALES POST

DAN ROBERTSON BUYS UNIVERSAL COOLER CO. OF CANADA

5-Year Protection Plan Issued for 'Supermetic' Units

GENERAL AIR CONDITIONING MAKES COMBINATION UNIT

Dean Products Elects Raskin Vice President

LONERGAN MFG. CO. BUYS REFRIGERATION CORP. OF AMERICA

QUINLIVAN HEADS YORK AIR COOLING SALES

Distribution of Mills Freezer Goes to Freez-King

JORDON OFFERS PRICE PROTECTION POLICY

REFRIGERATION OIL SALES IS ANSUL PLAN

Victory Metal Shows New Commercial Line

Bonneville Appointed Remington Sales Mgr.

E. A. Tracey Fills Key Post at Mitchell Mfg.

L & H Adds Refrigerators, Freezers to '50 Line

UNIFLOW'S BEER COOLER LINE OFFERS VERSATILITY

Iwashita Appointed Mgr. Of Products Planning for G-E Air Conditioning Dept.

Marsh Corp. Buys Electrimatic Div.

W. Paul Jones Elected President of Servel, Inc.

Tom Kennally Is President of Philco Refrigerator Div.

ARTKRAFT TO MAKE 'UNIVERSAL' REFRIGERATORS

ALLEN WILL HEAD SALES AT SUPERIOR VALVE

R. H. Bolin Gets New Westinghouse Post

Congratulations!

AIR CONDITIONING & REFRIGERATION NEWS

on your

SILVER ANNIVERSARY

from the F. H. Langsenkamp Co., first and largest air conditioning and refrigeration wholesaler in Indiana. Six conveniently located branch offices in Indianapolis, Ft. Wayne, South Bend, Evansville, Lexington, and Louisville, . . . serving the central states area with complete stocks of air conditioning, refrigeration and heating supplies.

F. H. LANGSENKAMP COMPANY

**KEEP REFRIGERANTS dry and clean**

**WITH MUELLER BRASS CO. DELUXE DRIERS**

Extra-capacity cone-screen filter unequalled for efficiency in the refrigeration industry.

**FORGED BRASS ENDS**  
Heavy duty type with husky wrench flats.

**INLET CONTAINER SCREEN**  
Positive desiccant retainer without pressure drop.

**DRYING AGENT**  
Installed under strict laboratory control with sealed charging equipment.

**LOCKED-IN CONE OUTLET SCREEN**  
Extra capacity free flow strainer surface.

**OUTLET RETAINER SCREEN**  
By itself, equal to the filter elements in most ordinary driers.

**WHITE WOOL DISC**  
Doubles filtering capacity.

**FILTER BED**  
Chemically cleaned wool mass traps fine metallic grit or other foreign particles.

The millions of Mueller Brass Co. Deluxe Driers that are now in service provide the kind of proof you want—proof that no other drier can approach for all-around efficiency on-the-job, and for good reason. The Mueller Brass Co. Deluxe Drier is a typical example of the dependability and quality that Mueller laboratory and development engineers have made available in so much refrigeration equipment. The famous cone screen filter greatly increases the Deluxe Driers' working life. The filter strainer unit of the Deluxe Drier removes every minute particle of foreign matter from the line—keeping the refrigerant completely clean as well as dry.

Order now from your refrigeration wholesaler.

Have these STREAMLINE products on hand for every job where you want dependable performance.

Write for catalog R-151 describing complete line of STREAMLINE refrigeration products.

STREAMLINE refrigeration products are individual and multiple packaged for complete protection.

**WROUGHT COPPER FITTINGS**

**VALVES**

**FLARE FITTINGS**

**LIQUID INDICATORS**

**MUELLER BRASS CO. PORT HURON 10, MICHIGAN**



"This survey points up one of the saddest problems facing the dealer."

## Survey Shows Appliance Field Tops List In Catering to Discount Buyers

CHICAGO—When it comes to passing out goods to consumers at "wholesale" prices, the appliance industry seems to top the list by a wide margin.

The No. 1 spot on the discount parade was awarded to the industry in a nationwide survey covering 132 individual consumers in 11 cities.

"One manufacturer made a move to prune down a postwar over-grown dealer organization."

### Thor Plans To Drop 13,000 Dealers

CHICAGO—Some 13,000 of Thor Corp.'s 20,000 home laundry equipment dealers will lose their franchises during 1950.

John R. Hurley, company president, announced that he has notified Thor distributors to streamline their dealer lists immediately and to retain only the 7,000 "best" dealers.

"We're through with the mass distribution method of selling," Hurley stated. "It is proving to be definitely unsound and detrimental to the entire major appliance and radio distributing picture."

"By law and by just plain economics, refrigeration was playing a greater role in farming."

### MILK COOLING REQUIRED UNDER COLUMBUS LAW

COLUMBUS, Ohio—Mechanically refrigerated farm milk coolers will be a virtual necessity on farms which supply milk to the city of Columbus, Ohio, under the terms of new milk and milk products regulation approved by the Columbus Department of Health.

In order to get a permit the dairy farm must conform to a number of requirements, among them being that the milk house "shall be provided with mechanical refrigeration for the cooling of milk or other means that shall provide means that will cool the milk to 50° F. or less."

"Some more communities put licensing codes into effect, but the issue was far from settled."

### Youngstown Code Sets Up Licensing of Contractors

YOUNGSTOWN, Ohio—Adopting a new refrigeration code as part of a general revision of its building ordinance, the city council of Youngstown has voted to license contractors.

Congratulations on your 25th Anniversary!

This Year is our 65th!

For the finest oil separators and flow control valves use

AMINCO

BUY THEM FROM YOUR WHOLESALE

AMINCO REFRIGERATION PRODUCTS CO.

14544 Third Avenue  
Highland Park, Michigan

Congratulations to AIR CONDITIONING & REFRIGERATION NEWS on your 25TH ANNIVERSARY

We had the pleasure of celebrating our 21st year in the refrigeration and air conditioning industry in April. We want to take this opportunity of hanking our customers, suppliers and industry-wide friends who have made our progress and success in the Air-Conditioning and Refrigeration field possible.

BOYD EVANS

UNITED REFRIGERATION SUPPLY COMPANY

366 South Main Street, Memphis, Tennessee

"Automatic defrosting of household refrigerators was attracting attention, with Westinghouse introducing a new development in this field."

### Westinghouse Line Includes 'Frost-Free' Refrigerator

NEW YORK CITY—The Westinghouse appliance division revealed details of a "frost free" household refrigerator which tops its 1950 line. The defrosting in the model ADA-96, a 9.6-cu. ft. refrigerator, is said to be accomplished so quickly that ice cream, ice cubes, and frozen food in the freezer compartment do not soften or thaw during the process, it is claimed. Temperature in the normal food storage area during the defrost period rises only about 2° F.

"Cooperative buying of refrigeration parts and supplies was given a try—duly reported in the NEWS—and didn't work out—also duly reported in the NEWS."

### Group Buying of Parts Dropped After 6-Month Trial by Contractor Assn.

DETROIT—After a six-month trial, the so-called "cooperative purchasing plan" has been dropped by the Refrigeration Contractors Association of Detroit.

Failure of the plan was laid to several causes including the tightening of the materials situation. However, there were numerous other contributing factors which doomed the experiment to failure.

"More compact units for complete residential air conditioning gave promise of opening up that market."

### York's Home Air Conditioners Fit Forced Air Furnaces

NEW YORK CITY—A line of six residential air conditioners, designed for use with any forced warm air heating system, and priced to provide a 5-room home with complete summer air conditioning for less than \$1,000, was introduced July 18.

### Automatic Firing Unit Combines Air Conditioner With Gas-Fired Furnace

ST. LOUIS—Making its entry into the national cooling and heating picture, Automatic Firing Corp. here has introduced its "Fridg-A-Fire" heater-cooler unit that combines in a single unit a packaged air conditioner and a gas-fired furnace.

"An important ruling was issued on contractor labor-relations in 1950."

### NLRB DECLINES JURISDICTION IN CONTRACTOR CASE

WASHINGTON, D. C.—The National Labor Relations Board has upheld a trial examiner's order dismissing an unfair labor practices complaint against a Cincinnati refrigeration and air conditioning contractor.

The trial examiner, Isadore Greenberg, had dismissed the complaint on the ground that the operations of the contractor were essentially local in character.

"As New York got a real water-shortage scare, it was fortunate that the industry had water-saving devices available."

### N. Y. LAW REQUIRES WATER RECIRCULATION

NEW YORK CITY—New air conditioning and refrigeration units installed in this city and using water at the rate of six to 50 g.p.m. must use recirculated water, the city commissioner of water supply, gas, and electricity announced recently.

The commissioner, Stephen J. Carney, also said that by May 1, all units using more than six gallons of water per minute must employ recirculated water.

"The 'Korean affair' soon had repercussions in 'scare' buying and shortages of vital materials"

### Some Retailers Report Start Of 'Scare' Buying

DETROIT—Fighting in Korea and participation in the affair by U. S. armed forces has had a pronounced effect already on the refrigeration and air conditioning, and consumer durable goods industries in general.

The situation has made itself felt in two principal ways:

1. Stimulation of consumer buying.
2. A greater tightening of the already tight supply of materials.

### 'FREON' PUT ON 'QUOTA' BASIS FOR SEPTEMBER

WILMINGTON, Del.—"Scare" buying of "Freon-12" for field service operation—in August, shipments were three times higher than normal—has forced Kinetic Chemicals Div. of duPont to assign quotas of "Freon" refrigerants to its national distributors during September.

"Segments of the locker plant field finally merged into one cohesive group."

### Locker Assns. Merged Into Single Group

CHICAGO—After years of mounting dissension that reached the climax in 1949 when separate shows and conventions were held, the two associations serving the locker industry were merged into a single organization during the 11th National Frozen Food Locker Convention.

To be known as the National Frozen Food Locker Institute, the new group succeeds the Frozen Food Locker Institute, which until last year had consisted of manufacturers, suppliers, and contractors, and the National Frozen Food Locker Association made up of locker plant operators.

"More and more new apartment houses were being air conditioned. Cooling proved to be a boon not only to tenants but to owners as well."

### Boston Apt. House Beats Rivals In Signing New Tenants (Thanks to Air Conditioning)

BROOKLINE, Mass.—Despite the fact that the Boston market was flooded with expensive apartments when the Beacon Towers apartments in suburban Brookline were thrown open for occupancy last summer, the owners had no trouble in signing up 34 tenants on three-year leases,

thanks to year-round conditioning. "This was due greatly to the fact that the air conditioning was running and in operation when these prospective tenants were shown the apartments," declares the J. F. Rand Co. of Boston, who planned the luxurious Beacon Towers.

"Manufacturers and dealers were trying to figure out the best way to use television as a sales tool."

### How Effective Is Television as Sales Tool For Air Conditioning, Refrigeration Industry?

"The pernicious practice of some food distributing organizations in putting out refrigeration equipment at cost to advance their line of foodstuffs continued to aggravate dealers."

"Cooperative newspaper advertising has been popular with dealers, but in practice some problems needed to be solved."

### Newspapers Hit by NAED for Rates on Local Co-op Ads

ATLANTIC CITY—The Appliance Div. of the National Association of Electrical Distributors has recently adopted a new resolution.

The resolution was one of five approved during the NAED's 42nd annual convention held June 12-16 in Convention Hall here. This resolution condemned "as uneconomic and discriminatory the practice of local newspapers in charging local electrical appliance distributors and dealers national rates for purely local cooperative newspaper advertisements—while at the very same time granting lower local rates to competing regional and national retail chain organizations."

### RACCA ASKS U.S. AID IN FIGHT ON DIRECT SELLING

CHICAGO—The board of directors of the Refrigeration and Air Conditioning Contractors Association has directed the group's executive vice president to procure all available governmental assistance in stopping the practice of ice cream manufacturers and frozen food processors of furnishing refrigeration facilities to retail food outlets.

"Supermarket air conditioning could snowball into a huge new market."

### Use of Air Conditioning by Eastern Market Chain Seen Heralding New Trend

BUFFALO—A big future for the air conditioning industry in the supermarket field was envisioned here with the opening of the new air conditioned Loblaws market at Delaware Ave. and Sheridan Dr.

### For efficient heat transfer "Ro-Fin" Tubes

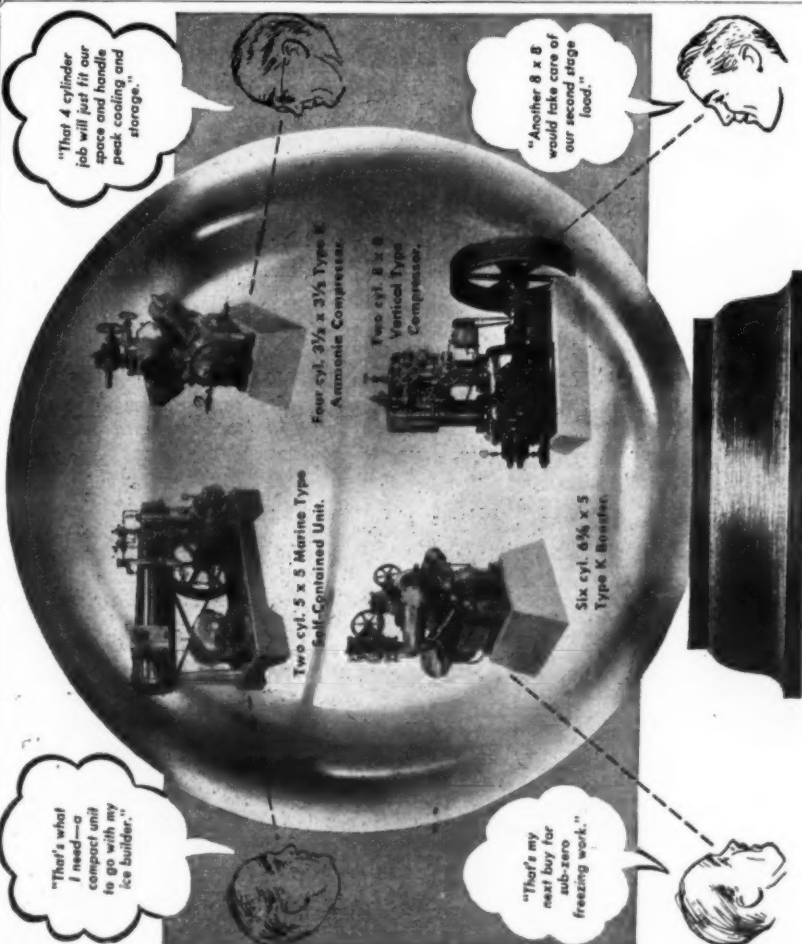


There are nearly 100 sizes of Rome Extended Surface Helical Fin Tubing in production... with or without threaded end connections, or to be used with standard flare connections.

Write for information on your heat transfer problems:



222 Canal Street • Rome, N.Y.



Look ahead with Refrigeration

From the CP "Balanced Line" you'll get —not just a compressor—but exactly the unit you need, to do your refrigeration job... large or small... with efficiency and economy assured by CP's more than 60 years of refrigeration pioneering and leadership. You're right when you choose CP.

THE CREAMERY PACKAGE MFG. COMPANY  
General and Export Offices: 1243 W. Washington Blvd., Chicago 7, Illinois



## Advertising Made History, Too

Advertising, "The Power to Move Goods," plays a significant role in the growth of all great industries. And it has carried the ball for refrigeration and air conditioning.

The industry's advertising, as recorded in AIR CONDITIONING & REFRIGERATION NEWS, tells an interesting story. The industry learned early and never forgot that "one good dealer is worth a thousand consumers."

Because advertising is not a science but, rather, an emotional and inspirational art, it often scores a direct hit. Also, sometimes, it sputters or is a complete dud. Pretty much, in fact, like the record of a star salesman. And because advertising is imagination in action, reaching for the minds of men, its voice is by turn factual, promising, exciting, humorous, visionary, prophetic. It is also bombastic, superlative, and even dull on occasion.

With this in mind, let's take a fast look through the advertising pages of the NEWS since its first issue in September, 1926.

In reviewing the ads, we noted, of course, some "strong voices" of the earlier years which no longer are a part of the industry. We also could trace the steady growth of companies that started modestly and became and are leaders in the field.

### 1926

In the very first issue of the NEWS, September 11, 1926, Kelvinator told dealers, "The selection of tested and proved products like Kelvinator to form your line of electric appliances is vital to the building of public confidence. . . ."

"Servel refrigeration is usually cheaper than ice," the first Servel ad modestly claimed. Copeland in that issue featured "Five minute service" and said that "108 ice cubes can be frozen at one time." Think no defrosting is new? In 1926, American Electric Corp. claimed of their unit, "It is self-defrosting."

In these early days appeared such ads as that of Rice Products, claiming, "Now, for the first time, electric refrigerators that can be profitably merchandised. . . ." The Society for Electric Development contributed, "As Reliable as Electric Lights. . . ." Iroquois Electric Refrigeration Co. played the safety angle with "Safe Refrigerant—Non-Poisonous, Non-Corrosive, and Absolutely safe. It has a slight, but non-offensive odor when released in the air."

1926 was a year when only 210,000 household refrigerators were reported sold, a year when salesmen were still having hand-to-hand tussles with the ice man, when "practical" and "safe" were big selling points.

### 1927

Laying a ghost of the period, Berg

Mfg. Co. offered, "The phantom \$155 cabinet becomes a reality in the 1927 line of Ice-Berg electric refrigeration. . . ." Welsbach Co. claimed "20 pounds pressure, 280 r.p.m." In May, 1927, General Electric introduced the famous Monitor Top with "Now comes simplified electric refrigeration. . . after 15 years of intensive research." Norge said, "Until now the term 'LIFETIME' electric refrigeration has never been used. The world's first lifetime electric refrigeration. . . only three working parts—all submerged in oil."

### Industry's Progress Told In Ads

In advertisements written especially for THE NEWS, manufacturers have told about their engineering developments and new sales strategies.

By lifting headlines and slogans from a few of these advertisements, trends can be spotted. This article does a hop-skip-and-jump with that material.

eration has never been used. The world's first lifetime electric refrigeration. . . only three working parts—all submerged in oil."

In commercial refrigeration McCray offered display cases "to be used with ice or machine—for stores, clubs, florists, homes." The Hibbard Co. had "Dry Cold" beverage cabinets that "have changed overnight the bottling business from the TUB AGE to the ELECTRIC CABINET AGE. . . ." Bernard Gloekler Co. told of the "12 months in the year demand for commercial refrigerators. . . ." Nizer Sales and Service claimed the pioneer electric ice cream cabinet.

Harder Refrigerator Corp. plugged its "Kleen Kold" refrigerators, while the Illinois Refrigerator Co. (no doubt in tune with the times) said, "These are days of claims and counterclaims."

### 1928

It might have been a shadow of things to come when Servel in February, 1928, offered lower prices along with optional colors. . . Walraven Brothers of Dallas said, "Selling the 'idea' of electric refrigeration by Central Stations is ready to go." Iron Mountain Co. chimed in with the Zerozone story on a "complete line of domestic self-contained units, remote installations, multiples for apartments and commercial installations."

In the commercial and accessories field we see the first mention of the "squeeze out" ice cube tray. . . Copeland invited dealers to see "Silica Gel—a remarkable new refrigeration process. . . ." Dole offered an opportunity "in between the two big markets of household and industrial refrigeration. The line meets

the need for intermediate commercial sizes of automatic refrigerating units." . . . The D. A. Ebinger Sanitary Mfg. Co. (now Ebco) in 1928 told dealers that "Ebco electrical cooler fountains have been on the market for three years." Coming quite a few years before milk coolers became a really big item, Haven Mfg. Co. offered a unit that "is mounted on a board that rests across the middle of the cooling tank. . . any suitable tank." . . . Iceless Cooler Corp. of Chicago claimed for their ice cream cabinet and fountain line, "The only rat and vermin proof equipment of its kind ever developed." . . . Savage Arms Corp. had a three-point approach on ice cream cabinet refrigeration with "less need of service. . . lower depreciation. . . quiet efficient operation."

In 1928, Norge used the theme "Economical as the Scot of fiction." . . . Servel introduced the "heat that freezes" with the Electrolux gas refrigerator. . . . Odor problems were met with the Insulite Co.'s ad on wood fiber insulating board.

### 1929

The industry was rolling by this time, despite the 1929 crash. It was headed for an 850,000 unit year. Companies with increasing numbers of users plugged satisfaction and small service cost as General Electric did in May of this year with, "250,000 users—and not one has spent a dollar for service or repairs." . . . In commercial refrigeration, Harry L. Hussmann Refrigeration Division of Hussmann-Lig-O-Nier Co. offered a case that "maintains a lower temperature at the front of the case than where air enters the coil compartment." . . . Merchant & Evans Co. told customers they had "a complete line of quality apparatus." . . . Filtrine Mfg. Co. showed their 1930 line of water coolers.

The increasing importance of commercial refrigeration was reflected by a full page ad by Seeger on commercial cabinets. . . . Universal Cooler (note that refrigeration was usually qualified during this period by "electric") offered "one of the easiest selling lines of electric refrigeration." . . . General Electric stressed hermetically sealed units for commercial refrigerators. . . . Illinois Refrigerator Co. (were they appealing to women or men?) offered "legs for beauty." They claimed the legs made for easier cleaning underneath and promoted better housekeeping. . . . Absopure came up with the "world's lowest priced electric refrigerator" in their "Baby Grand."

### 1930

Heading into the era of breadlines and high unemployment, advertising carried an increasing force. . . . harder-hitting adjectives, sales contests and the like. It was a year that saw an awareness of the possibilities of frozen foods, which, after a fast start did not catch on until years later. It was a year that saw Westinghouse feature "broom high legs, hermetically sealed unit, freedom from radio interference." . . . Weber Showcase & Fixture Co. announced a new display case for frozen foods. . . . Oreole Ottenheimer advertised a cabinet "used in merchandising frozen foods under the Birdseye patents." . . . Alaska Refrigerator Corp. admitted that the icebox was still tough competition with the note that their unit was designed "to fit nicely in the space formerly occupied by the ice box." . . .

Trupar Mfg. Co. of Dayton came out with the "period design" Mayflower unit. . . . Zerozone played to the shrinking public pocketbook with a \$149.50 model that "combines all the latest features of high priced refrigerators." . . . Leonard offered a "moderately priced refrigerator covering 80% of the electric household market." . . . Grigsby-Grunow put the Majestic on the market. . . . Illinois Moulding Co. bowed in the "King-Kold." . . . C. V. Hill Co. was featuring the dry cold display case and added that "defrosting is completely solved." . . . The C. Schmidt Co. plugged a refrigerator display counter. . . . C. L. Percival had a display case with "20° in freezer enclosure and 40° in other end—coils

overhead." . . . Liquid Cooler Corp. (now Temprite) "opened a vast new field for profitable restaurant business" with water and beverage coolers.

### 1931

The pinch was on the country's economy, and industry advertising reflected it through 3-year guarantees on household units, promises of increased national advertising and lowered prices. Such advertising as, "Selling is hard work these days. People hang on to every dollar twice as hard" was noted, along with the "Let's Go to Work" theme. There were guarantees that covered "both the machines and the perishables they protect." Dealer helps were offered on every hand.

Still, the refrigeration business was going ahead fast. There were added starters in the household field. Westinghouse and the "completely balanced" refrigerator "went national." . . . Majestic trumpeted, "The World Expected It! Majestic has done it. First in the quality field at the sensational price of \$99.50. Terms as low as \$5 per month." . . . Stewart-Warner broke in with an "over-powered, fast freezing unit. . . . sensationally low prices." . . . Gibson (formerly a top producer of ice-boxes) hurdled the fence and told subscribers to the NEWS: "A background of 50 years' experience and over. . . . now brings to you the Gibson electric refrigerator. . . . 3-year guarantee, safe-type doors defy leakage of air."

### 1932

Another lean year in American business. It was a year of "growing pains" in the refrigeration and air conditioning industry. It could have rolled over and played dead. Not so! Hard-hitting advertising urged dealers to roll up collective sleeves and lick the depression. The industry was offering new models, more new faces came on the manufacturing scene. . . . 4-year service plans were offered. . . . prices were quoted installed "with tax paid." . . . Ad slogan's like G-E's "How Smith and Jones beat the depression" aimed at pumping life into limping sales.

Tricold Refrigerator Corp. made a stir with the new Potter model, introduced by a 20-page advertisement in the NEWS. Featured were "three

zones of cold," and "proper humidity to prevent drying out of foods."

The NEWS (then ELECTRIC REFRIGERATION NEWS) headed an ad on the Specifications Issue with, "The Spotlight is on Parts, Materials, and Construction." Carrier, York said, "Get Into Room Cooling. . . a brand new business—portable room coolers offer a new untouched market." . . . Armstrong Cork Co. told manufacturers in a NEWS ad: "If you were retailing pork chops, you'd be glad to hear this cabinet is insulated."

### 1933

Bidding to take the important industry position they now hold, parts, accessory, and commercial unit manufacturers turned higher calibre advertising guns on the trade. Alco Valve Co. (of their new thermostatic valve) said, ". . . can be installed in any position or location and in any temperature." . . . Curtis asked dealers to telegraph or write for completely automatic beer pump information.

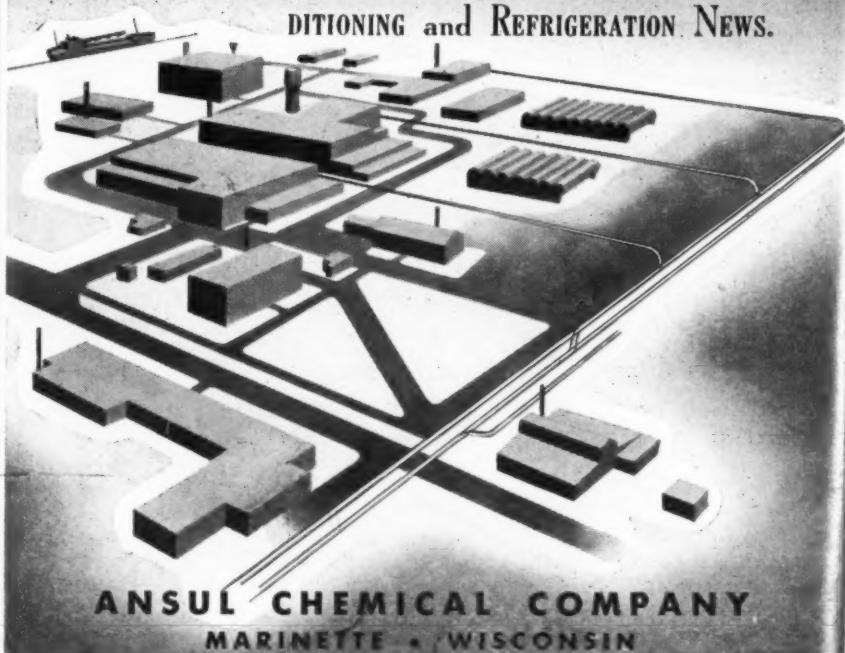
This was the year that beer came back and Fedders Mfg. Co. (now Fedders-Quigan) headed an ad with, "Beer is here and Fedders is ready for it." . . . Liquid Cooler Corp. (Temprite) said, "An avalanche of business will be on its way soon after the 36th state has voted for repeal." . . . Kold-Hold used a full page ad signed by R. E. Olds (famous automobile pioneer) to tell the story of a new system of "storing refrigeration." . . . Bundy Tubing told subscribers about "these eight welds made at the same time without flame or arc by electric hydrogen welding." . . . Dupont broke its finishes advertising by saying, "This new type refrigerator finish—the whitest you ever saw."

Motors, too, started to get a play. Delco gave as its three main product features a "non-spillable end head, rubber cradle mounting, no end-play noise." . . . Dry Zero Corp. went highbrow by quoting a Chinese proverb to point up commercial insulation features. It went, "When danger threatens, the gazelle seeks refuge with the herd but man flies home to a trusted friend." . . . Kerotest introduced a GW control "for reducing running time of compressor to the minimum" and commercial manifolds with extra large valve. Larkin Coils headed their ad, "A Larkin Coil for Top Icer Grocer (Concluded on next page)"

Congratulations...

Ansul Chemical Company, manufacturers and distributors of Refrigerants and Refrigeration Products, congratulates AIR CONDITIONING and REFRIGERATION NEWS on their Silver Anniversary.

Ansul is one of the first and most consistent advertisers in AIR CONDITIONING and REFRIGERATION NEWS.



ANSUL CHEMICAL COMPANY  
MARINETTE • WISCONSIN

# PARAGON

## DEFROSTING TIME SWITCHES



300-M SERIES

From \$19.50 List

FOR COMMERCIAL DEFROSTING — Electric Heat • Hot Gas • Compressor Shut-Down

THE FINEST TIME SWITCH YOU CAN USE

FOR UNIT COOLERS • WALK-IN BOXES FROZEN-FOOD DISPLAY CABINETS LOCKER PLANTS • REACH-IN-CABINETS • FUR-STORAGE VAULTS

See your jobber or write to:

**Paragon ELECTRIC COMPANY**

1687 TWELFTH STREET • TWO RIVERS, WISCONSIN

AMERICA'S LARGEST EXCLUSIVE MANUFACTURER OF TIME CONTROLS FOR ALL USES

Makers of the famous "de-frost-it" for domestic refrigerators

Paragon 300-M series offers you the finest in accurate, durable, precision-built time switches for all types of commercial defrosting applications where defrost period is two hours or less. Easy-to-set pin-type dial for up to 8 periods per day. Heavy hinged case; unbreakable door glass. Also made in heavy-duty outdoor type, Series 330.



## Advertising Made History, Too

(Concluded from preceding page)  
Boxes." Meanwhile the household section of the industry was really whooping it up with cooking schools, contests, elaborate prize trips, Chicago Century of Progress excursions. Crosley Radio Co. made a big play in the new Shelvador with the "increases usable space 50%" tag. . . .

### 1934

Business showed more signs of life. 390,000 household units were sold. One big advertisement in the NEWS shouted: "Whistles are blowing again . . . men are going back to work . . . shorter hours and higher wages . . . retail sales are up." . . . It was a year when manufacturers hit back at special discount practices as Potter did with an ad captioned, "Friends of mine, George, make them a special price." Household ads put the spotlight on special accessories . . . warranties got up to five years. Copeland said: "Bread and Butter—that's what commercial refrigeration means to the distributor day in and day out." . . . Rotary Seal's product was designed to "stop those leaks around the compressor." . . . Detroit Lubricator had a "Thermodynamic expansion valve—8-tons Freon." . . . Brunner charted its growth with "from 1931 (two compressors and three high sides) to a line of 4 compressors, 51 high sides; with 112% increase in sales." . . .

Henry Valve advertised a Dehydrator as "the only dryer with a liquid sight port." . . . Trenton Auto Radiator Works (now Kramer Trenton) offered a new catalogue on shelf evaporators. . . . And in the laugh section, Commonwealth Brass headed its ad with, "Countless Variety of Nuts for the Refrigeration Industry." . . . Imperial Brass plugged its service tools with, "For fast work in emergencies." . . . Ansul Chemical promised "a laboratory analysis of sulphur dioxide and methyl chloride." . . . An ad carrying a box number was headed, "A Liberal Reward—will be paid for information leading to proof of the existence of air conditioning systems prior to May 3, 1918 in which air, by-passed around a dehumidifier, was mixed with conditioned air and delivered directly to a room; or prior to December 22, 1922, in which automatically varied volumes of dehumidified air and unconditioned recirculated air were mixed."

### 1935

More than a million and a half household boxes were sold . . . first real attention was given to the replacement market. At that time, about 30% of the wired homes had electric refrigerators. Also, mention was made of the growing number of "orphan" makes and undersized units. . . . Prophetically, Atwater-Kent announced a new household refrigerator . . . Fairbanks Morse captioned a NEWS ad with, "The idol of the refrigerator industry has become the idol of every housewife." . . .

Both Servel and Crosley went for the "market beyond the wired home" with kerosene models. . . . A liquidation sale of Grigsby-Grunow was announced by order of the United States District Court in 1934. Some time later Bill Grunow broke his trust fund, and was back in business with a refrigerator which featured "Safe Carrene" refrigerant. . . .

### 1936

This year was to see over 2,000,000 household units sold and over 325,000 commercial condensing units. It was a year of easier credit terms . . . finance plans to push sales higher . . . price selling was fading . . . more profits for dealer themes ran through the advertising.

The parts and supplies business was gathering real headway. The "Joiber" (or wholesaler) was gaining new importance. Wolverine Tube headed one NEWS advertisement with, "And we're still working nights." They cited heavy demand of service men and manufacturers for copper tubing. . . . Weatherhead ran a "Garden of profit" ad on their accessories line. . . . Automatic Products (now A-P Controls Corp.) offered two new expansion valves. . . . C.T. announced a new 6% budget plan for refrigerators and

major household appliances . . . "fills the gap left by withdrawal of F.H.A." was the theme. . . . Commercial Credit Co. offered, "The Right Time Payment Plan Makes More Sales."

The water cooler business was getting a big play. . . . Cordley & Hayes were stating: "There is money to be made in electric water coolers." . . . General-Electric wooed dealers with, "As Easy to Sell as Household Refrigerators." . . . Puro Filter offered new models. . . . Kelvinator claimed "complete coverage of water cooler market." . . . "Liberal Finance Terms that Open up New Markets." Beverage coolers were also a bigger number this year.

Dry Zero editorialized: "If both dealers maintained the established price and sold on the basis of value and service their competitive position would be just the same as though they both cut the price. Not many men will understand this. It is too simple."

General Household Utilities, in a "bad boy" role, cried: "Worse than Fire! No wonder customers are asking, 'Isn't there any electric refrigerator that uses a safe refrigerant?'" . . . Fairbanks Morse got aggressive with, "Frankly, aren't refrigerator prospects a little jaded from the repetition of refrigerators with small differences?" . . . Coolerator announced "the last word in modern refrigeration" with an offer to "try Coolerator 10 days free." . . . Norge had a 10-year warranty on its Rollator Unit.

And the "newspaper of the industry" became AIR CONDITIONING & REFRIGERATION NEWS!

### 1937

With a good year under its belt, the industry turned on the advertising heat in 1937. It was after another 2 million unit year, and made it—with a half million to boot. Air conditioning was still the great "promise." Commercial condensing unit sales turned upward, and finished the year with a 360,000 sales total.

Crosley opened an air conditioned proving ground to up quality control, announced "new standards for quality manufacture and low cost of operation." Such ad captions as "shattered all previous records." . . . "Now America's Buying More Than One a Minute." . . . "The Hit of the Year" were the order of the year.

Brunswick-Balke-Collender was offering dealerships on its three purpose "Blue Flash" beverage cooler, and Schaefer had "the most complete line of ice cream cabinets in the industry." . . . Virginia Smelting Co. used a cocktail party scene with a "cocktails deluxe, thanks to Modern Science" head to plug dry Esotoo and V-Meth-L.

### 1938

Although commercial refrigeration topped the previous year, household sales slumped almost a million units. The NEWS published "Appliance Selling Today," by Phil B. Redeker, and eager-to-learn dealers bought it in record numbers. In air conditioning, sales were inching along. They posted a reported 13,350 room units in this year. The 500th issue of the NEWS was dedicated to promotion of the first All-Industry Show to be held in Chicago in January, 1939 (an idea first proposed by F. M. Cockrell).

With more and more of all types of refrigeration equipment in service, improved parts and accessories were being designed and sold. . . . Mueller Brass announced a new "Tripl-Seal diaphragm valve for refrigeration lines." . . . Peerless of America unveiled an ice cube maker of 18 tray capacity. . . . Koch spotlighted the "Econ-O-Cooler" in a new walk-in line. . . . Percival had its "Streamliner" display case. . . . Edison General Electric (Hotpoint) claimed "20% faster freezing at even lower cost." . . . Crosley came up with a new wrinkle in a NEWS spread which proclaimed: "Built-In radio enables you to capitalize on the fact that Mrs. Prospect need no longer miss her favorite radio program because she has to be in the kitchen."

### 1939-40

These two years were important ones in the growth of the industry,

and advertising kept pace with increased dealer appeals to "keep on selling." . . . By 1939, the commercial unit business was close to the half-million mark; and 2,720,000 household units were sold.

Wall Wire Products predicted "that the home refrigerator industry will soon use stainless steel shelves as standard equipment." . . . Gale Products offered its "kit" refrigerator to convert "from one price class to another by simply changing the kits." . . . Ideal Beer Cooler offered "no stopping, no defrosting—wet or dry cooling" in their beverage cooler line ad. . . . Jewett claimed their "Beerador" beverage cooler "cuts handling with revolving shelves—shaped like a stein bottle." . . . McQuay advertised a "quick defrosting locker room unit with sharp freezer cabinet." . . . White-Rodgers recognized the growing service and installation business volume with "Your installations deserve the performance and appearance of 'Hydraulic-Action' line voltage thermostats." . . . Bush Mfg. Co. claimed "tops in efficient cooling" for a panel cooler. . . . Master Refrigerated

### Punch and Power In These Messages

The exciting progress of a fast-moving business is reflected in the advertisements which have appeared down through the years in AIR CONDITIONING & REFRIGERATION NEWS. They are special messages for an unusual audience, and are crammed with vital information and selling arguments.

Although 20 pages would have been required to do this job properly, the rapid review presented here should interest all readers.

Locker Systems offered a new unit with "an outstanding locker in design and construction."

Norge emphasized "selling up" by declaring "600 out of every 1,000 Norge buyers choose De Luxe models." . . . Frigidaire headlined, "Better than ever for less than ever." . . . Westinghouse featured "Temp Control" for proper humidity. . . . Kelvinator and Leonard advertised tremendous sales gains. . . . General Electric plugged "the Refrigerator with Conditioned Air."

### 1941

Most advertisers were "looking over their shoulders" at war possibilities. Parts and materials suppliers began to state their case for materials. Aluminum Co. of America announced: "Defense requires and is using more aluminum per month than peacetime America ever consumed." . . . Deepfreeze headed a 1941 ad with, "Deepfreeze Creates a Brand New major appliance market." . . . Mills Novelty Co. (now Mills Industries) announced 3 and 5-ton package air conditioning units. . . . Brunner recognized increasing growth of frozen foods industry with tie-in condensing unit ad. . . . Chrysler-Airtemp made bid for package air conditioning business with, "Only 10% of businesses needing cooling have it." . . . Sporlan was accenting the importance of service in these times with "selective charge" valve ads. . . . Penn Electric Switch announced a new type freezing control. . . . Tecumseh cited plus value of their new type air conditioned unit assembly rooms. . . . Kinetic Chemicals charged refrigeration engineers with real service obligation—showed ways to conserve "Freon." . . . Harry Alter promoted the importance of 12 Alter warehouses in the maintenance of 15 million domestic and commercial refrigerators.

### 1942-45

As did most major industries, refrigeration and air conditioning tooled up for war and produced a mountain of all kinds of war materials. Many companies were singled out for the Navy "E" and other commendations for their great effort. . . . Emphasis was put on the total uses of refrigeration and air conditioning in actual defense work and in the preserving of the food supply. The industry took on a mightier stature in these few years, a progress or maturity that enables it to convert in postwar years at a record pace.

As early as 1944, however, when the corner toward victory seemed turned, NEWS' advertisers were promising newer and better civilian

products. Home freezers were announced as the new star in the field. . . . Amana called it "The Number 1 postwar appliance." . . . Admiral pictured their "flex-o-plan" for remodeling postwar appliances stores. . . . Kerotest advised service ribbons to jobbers for "untiring efforts in supplying vital parts and equipment during emergency." . . .

Victor Products announced a new line of chest and vertical type freezers in July of 1945. . . . Philco, Kelvinator, Westinghouse, General Electric threw their collective hats into the postwar freezer ring. . . . Frigidaire emphasized engineering prowess. . . . Baker had started to reconvert and promised new lines. . . . Jordan built their December, 1945, ad around a self-service case. . . . Lehigh announced return to civilian production on complete line of commercial condensing units.

### 1946-47

In the first full year of postwar production, the industry saw many new advertising "faces" . . . some of which made themselves heard (or seen) for only a short time. . . . The industry was considered to be a place of milk and honey and fast long green for many newcomers. Around 500 home freezer manufacturers were in the field during 1946 and 1947. The older and tested firms kept climbing, however.

International Harvester announced a new line of household refrigerators and freezers. . . . Jack & Heintz used a full page ad to announce their "milk bottle" hermetic compressor. . . . Mitchell Mfg. Co. announced a new line of room air conditioners. . . . Halstead & Mitchell baptized a "double flow cleanable condenser." . . . Brewer-Titchener featured "frozen food display cases for the frozen food avalanche." . . .

In these years following the war, sales on all types of refrigeration and air conditioning swept to new highs . . . room air conditioners got moving and pushed well past the 150,000 annual mark . . . home freezers, at times spotty, settled into important yearly figures . . . household refrigerators went past 6 million in 1950. There were new stars among products . . . automatic ice cube machines . . . dehumidifiers . . . the great trend to open type display cases for self-service stores . . . frozen foods compartments were featured in home refrigerators and frozen

foods cases in food stores . . . new uses, new products announced in almost every issue.

The industry had grown to a giant in 25 years.

Frigidaire announced its new "Cold Wall Construction" . . . Koch introduced stainless steel reach-ins . . . Mitchell moved into the air conditioner business . . . Nevinger ran a "Helping the World" advertising series on markets for air conditioning . . . Kelvinator hammered home its theme that the good health of dealers is Kelvinator's prime project.

### 1948-1949

By this time the refrigeration industry had made the complete transition from the "dry cold" it used to talk about to modern "moist cold" in its advertised features. Everybody had a special angle on this sales appeal.

Air conditioners, of course, did not join this trend . . . Fedders-Quigan entered the room cooler field with punchy advertising . . . York bid for dealers . . . Philco plugged air conditioners, and Crosley advertised a new distribution plan on its Frostmaster freezers . . . Revco's freezer advertising talked about "engineering for the housewife" . . . Deepfreeze advertised its experience and "know how" heavily in the NEWS, and later introduced a household refrigerator line.

With the slogan, "Depend on Frigidaire to do things right," Frigidaire ingeniously promoted its "Meter Miser" unit in both household and commercial applications . . . Norge prolonged its consistent theme, "The Best Dealers in Town sell Norge." . . . Hotpoint celebrated its substantial gains in the refrigerator business by observing, "Everybody's Pointing to Hotpoint" . . . Kelvinator still convincing dealers of its "Retail-Mindedness" through unusual color advertisements with the slogan, "Get More—Get Kelvinator" . . . Penn Electric Switch Co. spotlighted an important new trend with the advice, "Sell Automatic Defrosting."

Trade advertising is the conscience, as well as the record, of an industry and the people who are a part of it. . . . The function of trade advertising not only is to promote, sell and inform, but to create and hold loyalty to a manufacturer and his products. NEWS' advertisers have done this well.

**COLD DRINKS KEEP CASH REGISTERS HOT!**



**Howard**  
brings you the  
**BEVERAGE COOLER**  
**BUY OF THE YEAR!**

**NEW TYPE BSC**

Here's a new Howard beverage cooler—available in 3 sizes for any need—that can't be beaten for appearance and efficiency at anywhere near the price! Top, doors, front apron and trim are of stainless steel. Doors slide into top for 100% visibility. Cooling is fast, and evenly circulated by a blower throughout the entire case. Units are completely vapor sealed, made of all-welded steel construction, and equipped with hermetically sealed compressors. The 6-foot case shown above has 3 doors, 5 compartments and holds approximately 27 cases of 12 oz. bottles. Write for complete catalog on our full line of commercial refrigerators and freezers.

**Howard Model BSC-39**  
8'6" case for larger installations.  
36 case capacity.

**Howard Model BSC-39**  
5-foot case for smaller stores.  
17 case capacity.

**Howard REFRIGERATOR CO., INC.**  
4745 Worth St., Philadelphia 24, Pa.



# **MILESTONES** FOR COMPANIES, INDIVIDUALS, AND TRENDS IN THE PAST 25 YEARS

## **1950**

Acme Liquid Chiller Suitable For Home or Commercial Air Cooling Jobs

**MILLER AND RIEGER** HEAD G-E PROMOTIONS

Newly-Developed Refrigerant 'Carrene-7' Is Announced

**BUCHOLZER HEADS** AIRTEMP DIVISION

Victory Produces All-Metal Line of Refrigerators

SAVAGE ARMS TO BUY CONTROL OF C. V. HILL & CO.

1/3-Hp. Room Unit In Mitchell's '51 Line

Automatic Products Becomes A-P Controls

E. D. Halsey Becomes Head Of Universal Cooler Sales

LITMAN ELECTED VICE PRESIDENT OF KOCH

Penn Switch Defroster Used On Self-Serve Cases

**CHERRY GETS KEY** PHILCO SALES POST

Reeco Puts Wallace In Charge of Manufacturing. Expands Output Capacity

Norris Heads Sales of Kerotest Brass Div.

L. C. Warren, J. D. Harris Get New Warren Co. Posts

**RHEEM MFG. PLANS** PRODUCTION OF GAS REFRIGERATORS

KINETIC IS MADE DIV. OF DU PONT AS PORCH RETIRES

Holl Succeeds Seeger as Refrigerator Co. Pres.

L. O. Bower To Head New Sherer Mfg., Sales Setup

**ZUMBRUN ELECTED** BRUNNER PRESIDENT

F. C. Shafer Is Elected Imperial Brass President

UNIVERSAL COOLER SOLD TO TECUMSEH

R. C. Graves Appointed Ben-Hur Sales Manager

Deepfreeze Introduces Refrigerator Line

MARVEL TURNS OUT 4-CU. FT. MODEL

Clary Named Norge Vice Pres. of Sales

**CORDINER SUCCEEDS** WILSON AS G-E PRES.

Emde Elected President Of Temprite Products

J. P. Scott Promoted to L & H General Sales Mgr.

**PHILCO BECOMES** NEMA MEMBER

## **Some Predictions Based on Current Trends**



Room coolers for a while may continue to find their best market in commercial applications, such as this Fedders unit in a small broadcasting studio, but eventually they may make a real dent in the mass home market.



Continued growth can be expected in applications of refrigerated vending machines, particularly if such things as milk venders for apartment houses catch on.



Ice cube makers will continue to be one of the industry's most popular sellers, with a tendency towards more compact models such as this one by American Automatic Ice Machine Co.

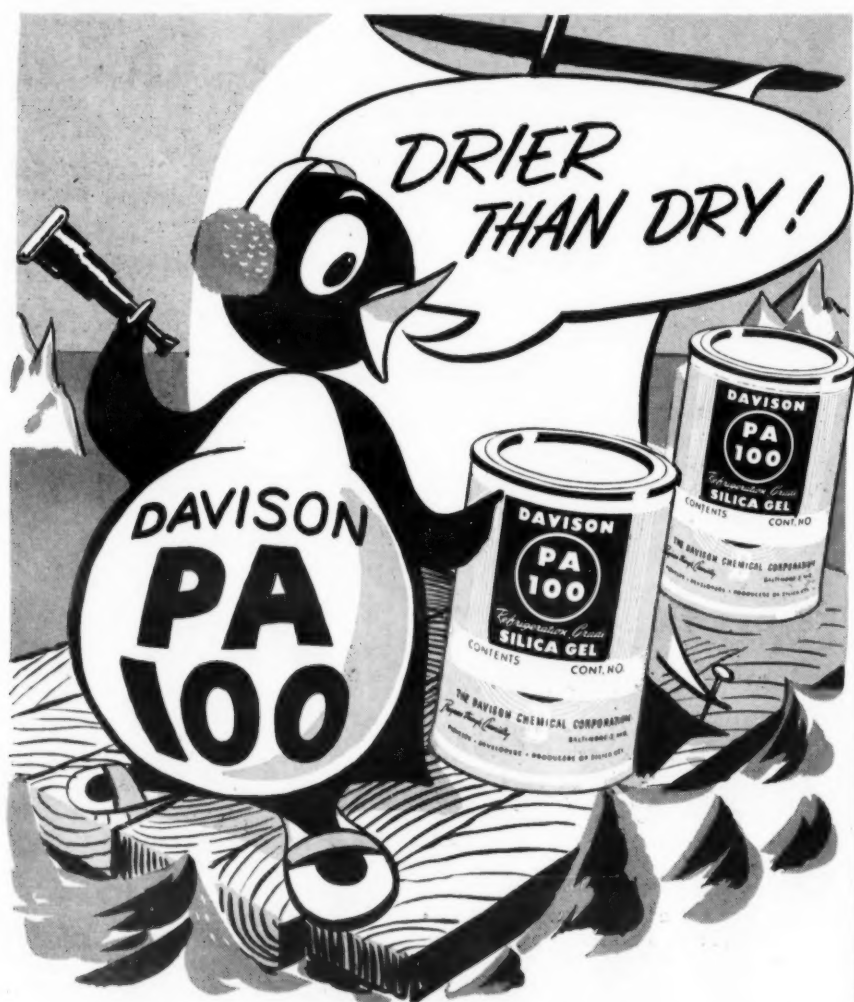


Package "store type" conditioners will continue to become more of the scene in commercial establishments and offices such as this Typhoon installation (above) in a bathing suit company. More water-saving devices in smaller capacities (note 5-ton evaporative condenser in background) will also find a market as the cry for water conservation is taken up.

The "heat pump" system for air conditioning is continuing to move along slowly but surely, and the "heat pump" hot water heater (on which Hotpoint Inc. has been running tests as shown above) may even pop into the picture.



Display cases will be built to offer a maximum of product visibility like this Jordan glass-fronted ice cream and frozen food case (right).



Tests prove PA-100 can dry refrigerants to moisture levels that cannot be reached by other refrigerant drying agents.

PA-100 cannot cause corrosion . . . actually helps prevent it by removing corrosive compounds from the system. It can be left in the system indefinitely without caking, dusting, deliquescing or channeling refrigerants.

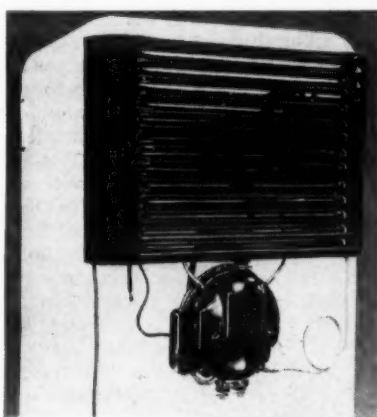
Order PA-100 . . . the refrigerant grade silica gel that insures protection against moisture. Available in cartridge or bulk can.

Progress through Chemistry

**THE DAVISON CHEMICAL CORPORATION**

Baltimore 3, Maryland

PRODUCERS OF: CATALYSTS, INORGANIC ACIDS, SUPERPHOSPHATES, PHOSPHATE ROCK, SILICA GELS, SILICOFLOURIDES AND FERTILIZERS



Cooler's Zerotator compressor, mounted on the back of the firm's 1950 model refrigerators, illustrates the trend to more compact refrigeration systems, which leads to larger-capacity cabinets occupying no more floor space than previous smaller models.



Restaurants can become a much greater market for refrigeration than they are now, if they get the story of how they can increase their profits with both conventional and freezer equipment.

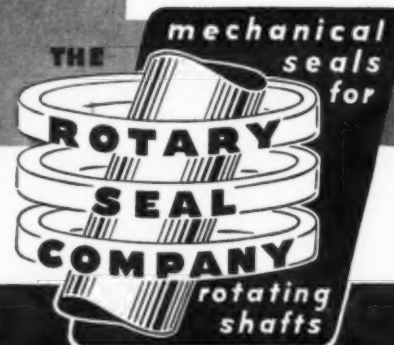
## **ROTARY SEAL**

### **Replacement Units**

- ✓ Easy to install
- ✓ Simple in Construction
- ✓ Efficient in Operation
- ✓ Economical

AT ALL

"Seal with



Certainty!"

**2020 NORTH LARRABEE STREET**  
**CHICAGO 14, ILLINOIS, U.S.A.**  
CANADIAN AGENT: 2025 ADDINGTON AVENUE  
MONTREAL 28, QUEBEC, CANADA



## Trade-Ins as Down Payments--

(Concluded from Page 1, Column 3)

The board explained that dealers are not restricted from offering discounts or rebates, but that such price cuts must be deducted from the offered price of the appliance before the down payment is determined, and not from the down payment itself.

It added that Regulation W provides that dealers must describe the trade-in in their records and set out "the monetary value assigned thereto in good faith." The regulation does not necessarily require that the allowance counted against the down payment be limited to the actual market value of the trade-in or to the amount for which the dealer

expects to sell it, it was further indicated.

These are the three specific cases where "trade-ins" are considered by the board to be rebates and not bona fide trade-ins:

1. Where the dealer does not actually receive delivery or take possession of the property for which the trade-in allowance was granted.

2. Where a substantial amount is offered in trade for items that have nominal or negligible value; for instance, in cases where a specified uniform allowance is offered for an old unit irrespective of make, model, or condition.

3. Where the cash price of the appliance is increased to offset the allowance given in trade. The price to be used is the same as that given if the down payment were made in cash or on a comparable basis.

The board summarized: "A trade-in allowance cannot be counted against the down payment required under the regulation except to the extent that it reflects a bona fide trade-in or exchange of property."

"The regulation does not prevent a registrant (seller) from giving rebates or discounts, or from calling them anything he may like; but no matter what he may choose to call them for his own purposes, they obviously cannot take the place of the down payment required by the regulation and cannot excuse the registrant from the requirement that he actually obtain the required down payment."

"In other words, a registrant is entirely free to give any trade-in allowances, rebates, or discounts that he desires; but such allowances, rebates, or discounts cannot be used as a cloak to conceal evasions of the regulation contrary to the principles here set out," the board summarized.

The dealer, the board added, is required to keep such records as are relevant to establishing that his treatment of an allowance as a trade-in or exchange in payment or part payment of the required down payment is in conformity with the requirements of the regulation governing trade-ins.

## CURRENT NEWS SECTION

On this page and pages 110 and 111 will be found the carry-over from the front page, and current industry news.

## Copper Stocks--

(Concluded from Page 1, Column 2)

responding to the amount used in filling "DO" or "CMP" rated orders in the past month.

(2) In addition, he can place orders for products to the amount of 5% of the difference between his average monthly inventory (by weight) during the base period and such inventory at the end of the last business day of the month. (For example, if his inventory at the end of the month was 50,000 lbs. and the normal average inventory was 100,000 lbs., he could place an order for 5% of the difference which would amount to 2,500 lbs.)

The distributor applies the allotment symbol X6 in placing either of the above-mentioned orders.

Order M-82 also imposes some limitations on acceptance of orders by distributors, preventing him from accepting an order from any one person for more than 2,000 lbs. of any brass mill product without the written approval of NPA, or accepting an order for any such materials which he does not have in stock or in transit to his showroom.

## Metals Cuts--

(Concluded from Page 1, Column 4)

Manly Fleischmann, Defense Production Administrator, revealed in a press conference that manufacturers of consumer durable goods will be allotted only 58% of the steel, 54% of the copper, and 46% of the aluminum they used during an average quarter in their base period—which is either the last half of 1949 or the first half of 1950.

Previously these manufacturers had been told that they would be permitted to use 65% of the steel, 60% of the copper, and 50% of the aluminum.

The copper strike and increasing demands for steel and aluminum in the defense program were given as reasons for the lowered allotments.

Fleischmann stated that NPA would soon issue orders standardizing and simplifying production in industries using large amounts of copper, such as the plumbing equipment field.

Steel allotments in the fourth quarter will be made as follows: 122,171 tons for household refrigerators, 19,162 tons for home and farm freezers, 36,313 tons for household electric ranges, 38,175 tons for washing machines, and 19,162 tons for electrical housewares except fans.

Copper allocations for these same products amount to 6,397,000 lbs. for refrigerators, 703,000 lbs. for freezers, 872,199 lbs. for electric ranges, 1,566,000 lbs. for washers, and 2,305,000 lbs. for housewares.

Aluminum allocations are as follows: 7,084,000 lbs. for refrigerators, 554,000 lbs. for freezers, 1,271,782 lbs. for ranges, 4,695,000 lbs. for washers, and 4,372,000 lbs. for housewares.

COMMERCIAL  
TRADES INSTITUTE, Inc.  
of Alabama

200 SOUTH 20TH STREET  
BIRMINGHAM, ALA.

"The Trade School of the  
Refrigeration Industry"

WE WILL BUY!

DRYERS, BELTS, DEFROST TRAYS,  
ICE CUBE TRAYS, ETC.

ANY QUANTITIES • MUST BE NEW

Write, Phone Or Call For  
IMMEDIATE ACTION

TRACO Industrial Corp.

455 W. 19 St., N. Y. 19, WAtkins 4-4302

(Send for Traco's complete list  
of sensational bargains)

## Hill's New Firm--

(Concluded from Page 1, Column 2)

design and engineering for manufacturers in refrigeration and other industries. Name of the firm is Walter P. Hill, Inc.

Services offered by the new organization are believed by Hill to be unique in the field. Not only will the firm develop new products or redesign existing items, but it will also design and produce the production tools necessary for the manufacture of the new or redesigned items, he explains.

"This is carried through to the extent that actual working production models are produced here to test not only the design of the product itself but the special machinery on which it's produced," Hill states.

Such production machines will be assembled in the Hill plant, hydraulic and electrical circuits installed, the completed assembly being tested in actual operation, according to Hill.

The firm numbers eight employees and has a well equipped machine shop. Working agreements with larger tool shops and builders of machine tools provide heavy production facilities.

Hill and his staff designed and erected the firm's ultra-modern building themselves. Incidentally, Hill comments, architects and builders hereabouts have asked permission to copy the design and certain construction features of the building.

Hill's experience has been primarily in the refrigeration field and at Wolverine Tube he developed the company's spinning and finning processes. In 1942 Hill received a Presidential Citation at the White House from Roosevelt for the spinning process development, which proved a boon to the production of artillery ammunition.

This was the first of such citations awarded to civilians, and only seven have been issued in the United States since then. Hill also served as a consultant to various branches of the government during the war.

Bernard Elzerman, who was associated with Hill for 11 years at Wolverine Tube, is in charge of shop operations in the new firm, which now has several research projects under development for the Army and Navy in addition to work for industrial clients.

Although Hill is now operating independently, he is being retained by Wolverine Tube as a consultant on product development work, it was announced.

## Pfaff Heads Baker--

(Concluded from Page 1, Column 3)

Smith. At the same time, Charles N. Bellm was elected executive vice president of the corporation, Mark Monney was elected a vice president of the corporation and manager of sales, and Charles Marshall vice president and contract production manager.

"No alterations in Baker's manufacturing or distributing programs are involved in the organizational changes which have taken place," although it is anticipated that, as a result of the election of Pfaff."

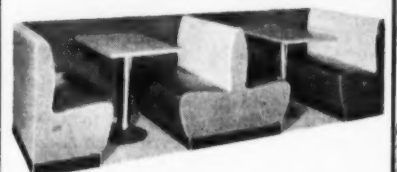
## Excise Tax--

(Concluded from Page 1, Column 2)

dehumidifiers, food choppers or meat grinders, ice cream freezers, electric and gas driers, washers, vacuum cleaners, and garbage disposers.

The committee exempted from the tax refrigerator parts sold by one manufacturer to a wholesaler for resale to another manufacturer.

## CHROME FURNITURE at LOW...LOW PRICES



Booth Illustrated  
single \$39.50 list  
double \$59.50 list  
wall panel \$22.00 list

BIANCO manufactures quality chrome furniture at prices that command fast sales action. A complete line from de luxe to economy. Booths . . . settees . . . tables . . . wall panels. Upholstered in rugged Duran for long life.

write for  
illustrated catalog  
2736 VICTOR STREET  
ST. LOUIS, MO.

## HOME FREEZERS

AVAILABLE FOR  
IMMEDIATE DELIVERY

Model A9A (9 cu. ft.) . . . \$239  
Model A15A (15 cu. ft.) . . . \$305  
Model A21A (21 cu. ft.) . . . \$399

**Louison**  
MINNEAPOLIS

COMMERCIAL REFRIGERATION EQUIPMENT  
524 27th Avenue South, Minneapolis, Minnesota

## TOP PRODUCT

in a growing market

MEANS  
MORE  
PROFITS  
FOR YOU!



LA CROSSE  
DIRECT  
DRAW  
WITH  
REFRIGERATED FAUCETS

Refrigerated faucets keep beer at ideal temperature from keg to glass . . . no matter how long tap is unused—the first drop is cold! No more wasteful, excessive foam . . . no morning draw off . . . no more "profit pirates." You save all those wastes expected of ordinary draw equipment and serve a superior glass of beer every time.

LA CROSSE COOLER CO.

2801 LOSEY BLVD. S. LA CROSSE, WIS.

EXPORT REPRESENTATIVES:  
Melvin Pine & Co., 80 Broad St., New York, N. Y.  
Cable Address: Eximport

WE'LL SEE  
YOU AT THE  
SHOW?



ALL-INDUSTRY EXPOSITION  
AT THE NAVY PIER,  
CHICAGO, NOVEMBER 5-8.

PRE-EXPOSITION SPECIAL ISSUE  
OF THE NEWS... OCT. 8!

Will you have an exhibit at the ALL-INDUSTRY EXPOSITION? What will you show there? What is your booth number? Who will be there?

Extend your invitation to visit your booth in an advertisement in the PRE-EXPOSITION ISSUE of the NEWS.

The purpose of this coming great issue is to create widespread interest, attendance at the

EXPOSITION—at Your Booth.

Editorial features will include floor plan and key to exhibits, program of events, schedules of group and association meetings, list of exhibitors, etc. . . a complete preview of a great exposition.

Your advertisement in this issue, October 8, will help increase attendance at the exposition . . . bring more buyers to your booth. Make space reservation now!

Advertising closes September 28

AIR CONDITIONING & REFRIGERATION NEWS

The Newspaper of the Industry



## To Discuss Air Systems For Atomic Laboratories

WASHINGTON, D. C.—Problems of designing air supply and exhaust systems for laboratories handling radioactive materials will be discussed by Carleton P. Roberts in a special conference to be held at the National Academy of Sciences here Nov. 27 and 28.

This is one of several factors in designing such laboratories that will be aired in the symposium to be sponsored jointly by the American Institute of Architects and the Atomic Energy Commission under the

over-all program of the Building Research Advisory Board of the National Research Council.

Besides the talk by Roberts, there'll be four others: "Design of Laboratory Facilities for Research with Radioactive Materials at Various Levels," by Alexander Mackintosh; "Shielding for Various Levels of Radioactivity," by Dr. Nelson B. Garden; "Surfaces and Finishes for Radioactive Laboratories," by James G. Terrill; "Waste Disposal," by Dr. E. C. Pitzer.

Those wishing to attend the conference should write the Building Research Advisory Board at 2101 Constitution Ave., Washington 25, for advance registration blanks, advises the board.

## E. A. Seibert Appointed To Staff of C. T. Lawson At Nash-Kelvinator

DETROIT—E. A. Seibert, Kelvinator director of parts and service, has relinquished this post after more than 25 years, to take a special assignment on the staff of C. T. Lawson, vice president of Nash-Kelvinator Corp. in charge of Kelvinator sales.

Seibert will act in an advisory capacity on parts and service in addition to other duties.

Lawson announced that Kelvinator will divide its parts and service operations into two separate departments. Steady growth in parts and service volume, he said, has greatly increased responsibilities.

Robert S. Geran, assistant service manager, has been appointed service manager. He joined Kelvinator in 1936 as field service representative, and after serving as an Army Ordnance officer during World War II, returned to the company in 1945, becoming assistant service manager in 1947.

Charles P. Eich, assistant parts manager, has been named parts manager. He joined Kelvinator in 1925, and had extensive parts and service experience in the field before his appointment as assistant parts manager in 1943.

## Winter Haven's City Hall May Get Complete Air Conditioning

WINTER HAVEN, Fla.—Winter Haven's city hall may be completely air conditioned if a proposal by city commissioners is carried out.

Commissioners agreed the air conditioning was necessary and made plans to study whether to air condition the second story chambers or the whole building. Estimating cost of cooling the top floor alone was \$25,000.

Commissioner Austin T. Race said: "Air conditioning would certainly increase the efficiency of the organizations in the building and would pay for itself in no time."

## York To Supply Cooling For 9 Cargo Ships

YORK, Pa.—John R. Hertzler, vice president and general sales manager of York Corp., announced that his firm has secured contracts to furnish refrigeration systems for nine cargo ships to be built in the United States and Canada.

Five of the ships will be built for the U. S. Maritime Administration by the New York Shipbuilding Co. of Camden, N. J. The air conditioning and refrigeration firm some time ago secured contracts for refrigerating 15 other C4-S-1-a cargo vessels for the Maritime Commission.

He also disclosed that his firm will furnish refrigeration for four cargo vessels being built by the Canadian Vickers Co., Ltd., of Montreal.

## Lake Wales Hospital Conditions More Rooms

LAKE WALES, Fla.—Another step in the expansion program at the Lake Wales hospital has been completed with the air conditioning of the operating room, emergency room, and delivery room. One other room in the hospital—used for people suffering from asthma—had previously been air conditioned.

## Davis Refrigeration Settles Suit with Hotel

ELMIRA, N. Y.—A settlement in a suit instituted by Davis Refrigeration Co. of Buffalo against the Mark Twain hotel was made in Supreme Court.

The case grew out of the Davis Co. installation of air conditioning systems in the Mark Twain during 1947-48. The balance of the cost of installation was disapproved by the hotel because it exceeded the original contract price.

The Davis Co. contended the price of the installation was necessarily raised because of a change in original plans and extra installation work.

Official referee for the case was William F. Santry, former Supreme Court Justice from Oneida.

The settlement followed two days of court action.

## Controls Needed To Keep Jet Pilot Comfortable Border on 'Fantastic'

MINNEAPOLIS—Problem of keeping a pilot comfortable in a jet plane borders on the fantastic. Though the plane may be flying in the stratosphere at sub-zero temperatures, interior of the cabin can become hot enough to cook a man in seconds.

This is disclosed by Minneapolis-Honeywell engineers in describing a new cabin temperature control system for high-altitude, high-speed aircraft. They said the automatic controls incorporated in the system go far beyond anything previously accomplished.

"The problems here are terrific," explained John V. Sigford, Honeywell's chief aero engineer. "A high-speed plane flies in sub-zero atmosphere with nothing but a thin sheet of aluminum between the pilot and the great blue yonder. But, strangely enough, the pilot doesn't need heat. He needs cooling."

"That is because of what we call aerodynamic heating. At high speeds, friction will cause the skin of the airplane to heat. Depending upon the plane's speed and altitude, skin temperature can get as high as 200°. As a result the temperature inside the cabin can quickly become uninhabitable."

"But that isn't all. Due to rapid changes in speed and altitude, cabin temperature can go from one extreme to another—and very quickly. Theoretically, it could zoom from zero to 300° in a matter of seconds."

In solving these problems, engineers devised a system that involves scooping up hot air from the plane's engine, and running it through a complex cooling system into the cabin. By means of ultra-fast temperature controls—so sensitive they virtually anticipate temperature changes—the system automatically mixes hot and cold air in proper proportions to keep the cabin comfortable.

Temperature of the air coming from the engine, after being compressed, may be as high as 750°. The air first is passed through an intercooler which reduces the temperature to about 300°. Then, heat energy is extracted from the air by mechanical means, dropping the temperature to 0°.

A valve is employed to mix the 0° air with hot air in proper proportions. The valve is operated automatically by the ultra-fast, sensitive controls that measure skin temperature, temperature in the cabin, and that at several points in the duct system.

## Cardinal-Browns Game Tickets Available to Industry Show Exhibitors

WASHINGTON, D. C.—Arrangements have been made so that exhibitors at the 7th All-Industry Refrigeration and Air Conditioning Exposition in Chicago Nov. 5-8 can see the professional football game between the Chicago Cardinals and the world champion Cleveland Browns on Sunday afternoon, Nov. 4.

George E. Mills, show director, announced that arrangements have been completed with the Cardinals to set aside a block of 400 box seats on the east side of the stadium. These seats will be available to exhibitors at \$4 a ticket.

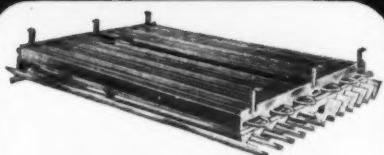
Tickets will be mailed to purchasers approximately two weeks ahead of the game. Tickets may be returned for refund up to 48 hours before game time.

Reservations may be made by writing to Arch Wolfe, Ticket Reservations, Chicago Cardinals Football Club, Inc., 51 Plymouth Court, Chicago 5.

## OPS Sets Prices on 2 Dorby Infrared Broiler Models

CHICAGO—The Office of Price Stabilization has approved retail ceiling prices of \$24.95 and \$29.95 for the two infrared broiler models manufactured by Dorby Co.

## Buy Peerless FOR PERFORMANCE



### Flash Coolers Fin Coils Flash Pans

The Peerless Line of quality products is designed and constructed to meet every demand of modern commercial refrigeration. Our Flash Coolers, Fin Coils and Flash Cooler Pans have proved their superiority in performance under widely varying operating conditions. They are built with an eye to appearance, economy of space, and the utmost convenience in installation and servicing. Louvers fabricated from polished aluminum. Made in a wide variety of standardized sizes and styles—all of unchallenged Peerless quality. Write for Bulletin 49G today.

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Desire to purchase 1/8 to 1-HP Sealed or Open type; standard brands; Complete condensing units; Also motors, controls, valves, etc. Give full details.

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## Furnace Makers Propose Code, Standardization Means for Blowers

CLEVELAND—A proposed code and standardized method for determining the pressure characteristics of furnace blowers is being studied by members of the Engineering Committee of the Furnace Blower Manufacturers' Association.

When published, the new code will provide a standardized method for furnace manufacturers to test and rate forced air furnaces.

Original work on this subject was done at the University of Illinois under the sponsorship of the association. The new code will, in all probability, be based on the University of Illinois test reported in Bulletin No. 76 under the title, "Proposed Arrangement and Method for Determining Pressure Characteristics of a Blower Used in a Furnace."

The committee's job is to simplify the original comprehensive report and make additions based on experience and study since that time. In this work the group has the assistance of Norman Buckley, of Timken Silent Automatic Division, who was associated with the original work at Illinois.

In its final form the code will follow the form prescribed by the Commodity Standards Division of the U. S. Department of Commerce in the event that the industry may wish to submit the committee's work as a commercial standard, according to committee members.

In attendance at a recent committee were Joe Brainard and Norman Busch, Air Controls, Inc.; John Burrows, Lau Blower Co.; George Gould, Viking Air Conditioning Corp.; Buckley; and Ward Brundage, The Brundage Mfg. Co.

## Methylene Chloride Put Under Allocation by NPA

WASHINGTON, D. C.—Methylene chloride, a chemical that is used as a refrigerant and in paint remover and photographic film, has been placed under allocation by the National Production Authority.

Methylene chloride is now classified as an Appendix A material under order M-45. This means a producer has to apply to NPA for permission to ship the chemical, and the purchaser will have to apply for permission to buy it.

Defense orders, will, of course be given first priority.

## Amana To Show '52 Line In Jan.

CEDAR RAPIDS, Iowa—Amana Refrigeration, Inc. expects to introduce its 1952 line of refrigeration products to its distributors early in January, Merlin Morris, a company official, declared here recently.

## OPS To Probe Fuel Oil Exports To Avert Mid-Winter Shortage

WASHINGTON, D. C.—Fearing that a shortage of fuel oil may occur this winter in New England and New York as a result of the brisk export business being carried on by fuel oil distributors who would normally supply only the domestic market, Office of Price Stabilization officials have started an investigation into the situation.

They feel that there probably are violations of export price ceilings inasmuch as firms which had not exported during the base period and are now doing so are required to submit their prices to OPS for approval. This apparently was not done.

## REMA Extends Its Hand Anniversary Good Wishes Sent to the NEWS

WASHINGTON, D. C.—Board of directors of Refrigeration Equipment Manufacturers Association at its summer meeting at Absecon, N. J. adopted the following resolution as "a tribute to AIR CONDITIONING & REFRIGERATION NEWS in recognition of 25 years of distinguished service to the industry."

"WHEREAS, AIR CONDITIONING & REFRIGERATION NEWS has been in continuous publication for the past 25 years and has thereby contributed greatly to the scientific advancement of air conditioning and mechanical refrigeration, as well as to the art of selling and merchandising in this field; and

"WHEREAS, this publication has been an inspiration and aid to the entire industry through its helpful articles and stimulating editorials; and

"WHEREAS, this Board of Directors desires to give public recognition and praise to the publishers and editorial staff for their distinguished service to the industry; and

"WHEREAS, this Board of Directors desires further to acknowledge with thanks the important assistance rendered by AIR CONDITIONING & REFRIGERATION NEWS in the formation and establishment of this trade Association; now therefore

"BE IT RESOLVED, that the Board of Directors of REMA, representing 120 manufacturers of refrigeration and air conditioning equipment, express to the publishers and editorial staff of AIR CONDITIONING & REFRIGERATION NEWS their deep appreciation and gratitude for the inspiration, outstanding leadership, and distinguished service which have helped immeasurably in the advancement of the industry and its benefits to mankind during the past 25 years; and

"BE IT FURTHER RESOLVED, that to this be added our sincere congratulations for the fine achievements of the publication and our best wishes for continued success and growth in its important work.

W. A. Siegfried, President  
R. L. Sears, Vice Pres.  
John Dube, Treasurer  
L. C. McKesson, Secretary  
W. Vernon Brumbaugh,  
Executive Secretary

## Memphis Chapter To Be Host to NAPRE Nov. 6-9

CHICAGO—The 42nd annual meeting of the National Association Practical Refrigerating Engineers will be held in Memphis on Nov. 6-9, with headquarters in the Peabody hotel, the group announced.

Featured on the program will be panel discussions by groups of experts who will discuss frozen food plants and operation, liquid refrigerant recirculation systems, and other topics closely related to the operation of industrial refrigeration plants. These symposiums will deal largely with questions and problems collected from actual operations in the field.

Individual papers will deal with a broad range of subjects particularly interesting to those who operate refrigerating plants. Included are discussions of methods to keep costs down and improve production.

Several phases of air conditioning operations will have special attention. Recent advances in plants and equipment will also be described.

The Memphis Chapter of the association is arranging plans for the entertainment of the attendants.

## Hotel Situation 'Tight' For All-Industry Show; Make Reservations Now!

WASHINGTON, D. C.—Warning that the hotel room situation in Chicago will be very "tight" this fall, the Refrigeration Equipment Manufacturers Association is urging that room reservations be made at once by those planning to attend the All-Industry Refrigeration and Air Conditioning Exposition.

REMA is sponsor of the exposition, which will be held Nov. 5-8 in Chicago's Navy Pier.

The show committee pointed out that although hotels have set aside blocks of rooms for exposition attendants, these "blocks" cannot be held open indefinitely. Therefore, the committee stressed, reservations should be arranged without delay. Reservations can be cancelled later if necessary, it was further suggested.

REMA is not taking care of individual reservations. These must be made entirely by the individual himself.

However, individuals will have a better chance to get reservations if they mention that they are going to attend the exposition, the committee said.

Chicago hotel headquarters for the industry groups are listed as follows:

REMA members and exhibitors, Hotel Sherman; Refrigeration Equipment Wholesalers Association, Hotel Sheraton; Refrigeration Service Engineers Society, Hotel Morrison; Refrigeration & Air Conditioning Contractors Association, Hotel Knickerbocker. National Association of Practical Refrigerating Engineers will have its headquarters at the Congress hotel.

## Light August Promotion Readies Inventories for '52 Deepfreeze Line

CHICAGO—Although many dealers received shipments of the new Deepfreeze home freezers in August, promotion of the line that month was held to a minimum so retailer inventories of 1951 models could be cleared out before widespread advertising of the new units was launched, according to B. G. Sanderson, sales manager.

The recently-announced freezers arrived at dealer's stores in crates marked "new model." Dealers were urged to move existing stock before putting the new models on display.

First consumer magazine advertising of the new line was published in the Aug. 25 issue of *The Saturday Evening Post*. Other magazines scheduled to carry Deepfreeze advertisements were *American Magazine* (September and October), *Better Homes and Gardens* (September), *American Home* (October), *Capper's Farmer* (September), *Country Gentleman* (September), and *McCall's* (September). Another *Saturday Evening Post* advertisement was to appear Sept. 22.

## Hospitals, Red Cross Units Use Jewett Blood Bank Refrigerator

BUFFALO—The Jewett Refrigerator Co., Inc. now is finding a wide market for its blood-bank refrigerator. It is being used widely by hospitals and Red Cross units throughout the country.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

MANUFACTURERS' REPRESENTATIVE, covering Southwestern States, desires additional lines, on commission basis. Particularly interested in ice-making, refrigeration, air conditioning and heating equipment. Will attend All-Industry Exposition in Chicago this November. Address P. O. BOX 4042, Austin 51, Texas.

### POSITIONS AVAILABLE

SALES ENGINEER—We have an opening for one or two sales engineers who have had practical field experience and can sell. This is a real opportunity. Send resume and request for interview to A. L. Munson, JOHN HARRISON CO. (Carrier Distributor for 16 counties in Pittsburgh area), 957 Butler St., Etna, Pittsburgh 23, Pa.

SALESMAN ON ref. fixtures & butcher supplies, capable of training, and handling Iowa sales, give full information. C. L. PERCIVAL REFRIGERATOR CO., Boone, Iowa.

DESIGN ENGINEER—with refrigeration air conditioning experience. Must be good draftsman, familiar with design and installation for large Carrier distributor. Excellent opportunity in Southern Indiana. Write BOX 3802, Air Conditioning & Refrigeration News.

MANUFACTURER'S REPRESENTATIVE to represent exclusive refrigeration specialty. Closed territory with dealers already established. Give qualifications and complete information. Write BOX 3805, Air Conditioning & Refrigeration News.

MAJOR AIR conditioning and refrigeration manufacturer, in New England, needs design engineers with three to ten years' experience to conduct research, development and production engineering work on open and hermetic compressors, central-plant air conditioners, room coolers, product coolers, and refrigerant and water coils of all types. Write BOX 3806, Air Conditioning & Refrigeration News, describing education, training and experience, and giving business and personal references.

ENGINEER FOR contract engineering and estimating in refrigeration and air conditioning with Carrier distributor in Pittsburgh. Pre-sale engineering of jobs plus check of jobs sold. Write giving full details of experience and education to BOX 3808, Air Conditioning & Refrigeration News.

SERVICE SUPERVISOR experienced air conditioning, refrigeration and heating. Permanent position with a well established distributor for one of the major refrigeration manufacturers in central Pennsylvania. Send photo, resume and state salary desired. Must be able to handle complete service department responsibilities and handle service men. BOX 3809, Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVE wanted by aggressive well regarded specialist in manufacture of sectional walk-in freezers, hardening rooms, tunnels and coolers as well as frozen novelty manufacturing equipment and ice making equipment. Desire coverage North Jersey, Metropolitan New York, and adjacent territory as well as in South West and Gulf Coast areas. Excellent opportunity for men not carrying conflicting line to represent top concern in field. Please advise territory presently covered, present representation. Replies absolutely confidential. BOX 3810, Air Conditioning & Refrigeration News.

### EQUIPMENT WANTED

WANTED TO buy—5-hp. compressors high suction, air conditioning evaporator 3/4 hp. up with fan or blower assembly, 1 1/2-hp. to 5-hp. sealed motor-compressor for air conditioning, complete machinery, equipment to manufacture showcases, package type air conditioners. All above, new or re-built. Write MEELEX, 1448-B Quezon Blvd., Manila, P. I.

### EQUIPMENT FOR SALE

1/4-HP open and sealed type prominent brands condensing units complete; brand new; limited quantity; act now: \$52 each FOB New York; write for specifications, other sizes also available; MANN REFRIGERATION SUPPLY CO., 15 Astor Place, New York 3, N. Y.

FOR SALE—while they last—standard makes—new hermetic units—static & fan-cooled cond. 1/4, 1/2, 3/4, 1, 1 1/2. Open Units—1/4—1 1/2. Relays—1/4—1/2—1—1 1/2—also overload protectors. #673 Methyl T.X.V. Capacitors in jet-black steel case 190-240 mfd. Small hermetic driers. 1/4" fl.—7 1/2" overall Driers. Household Cold Control—w/Knob & plate. Also other parts and supplies. Send for our latest list and prices. Sold on money back guarantee. WALTER W. STARR, 2833 Lincoln Ave., Chicago, Ill.

SALE—AIR conditioners, big name, top brand, 5 HP, 3 phase, new 1951 models, \$898.00 each. Reply BOX 3811, Air Conditioning & Refrigeration News.

### BUSINESS OPPORTUNITIES

FOR SALE—Commercial refrigeration, air conditioning, and electrical sales and service business. Also domestic lines. Excellent franchises. Top notch mechanics—good accounts. Located in defense area—southern Penna. Owner retiring—will sell at inventory which can be reduced. Approximately \$15,000.00 would handle. Write BOX 3812, Air Conditioning & Refrigeration News.

### MISCELLANEOUS

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock, 1 year warranty. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Complete set of three, \$1.15 plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 5, Michigan.

FOR SALE—10,000 ft. copper fin tubing. Catalogue No. 075042. 1/4 in. tube, 1 1/4 in. fin diameter. Various lengths 23 1/2 in. to 88 1/2 in. Price \$5.00 per ft. F. O. B. Minneapolis. Offered subject to prior sale. Write UNITED STATES AIR CONDITIONING CORP., Como Ave. SE at 33rd, Minneapolis, Minn., Telephone: Nestor 4501.

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Modern flush fronts with recessed handles in popular sizes. Ten models to choose from. Available in white Dulux, stainless steel fronts and glass doors.



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Whenever food or refreshment is served, ice cubes as you need them. Choice of 3 beautiful models.



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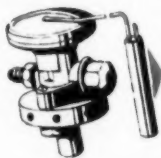
We will continue to pioneer in advancements that will make tomorrow even brighter than today. We wish to thank the industry for its enthusiastic acceptance of our products.

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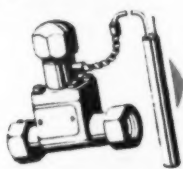


1936 - Cage-Type Take-Apart Construction developed for easy servicing

3 valves in one



1939 - Multi-Outlet Thermo Valve - for equal distribution



1947 - Snap-Action Suction Valve - for temperature control

cycle and hot gas defrost



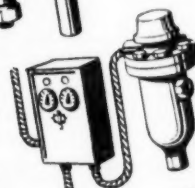
1950 - Explosion-Proof Industrial Solenoid Valve



1949 - Type 402 Liquid-Charged Pressure Limiting Thermo Valve - for motor protection



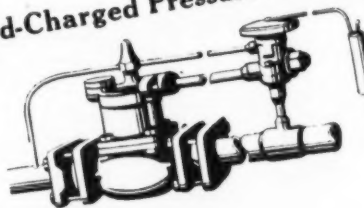
1937 - Type TK Thermo Valve -



1946 - Lectro-Level Float Switch



1948 - 4-Way Valve - for heat pump reverse



1951 - 100-200 Ton Expansion Valves

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